Feminist Perspectives of Socially Responsible Design:
A Case Study of Sustainable Health Enterprises

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Abstract

This thesis will examine the relationship between women and socially responsible design through a case study of Sustainable Health Enterprises (SHE). Its principle aim is to investigate how women, design, economics and development interact on a global scale, and to explore the emergence of design solutions that are innovative in their attempt to mitigate these various components. By tracing the history of socially responsible design, this thesis aims to uncover how the field addresses women's needs. Prominent gender and design scholars are used as a guide to critically consider such needs to expand the scholarship of socially responsible design by adding feminist perspectives. This thesis suggests that SHE exposes patriarchal structures of the field by addressing an issue that is distinctly feminine – the need for sanitary pads.

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Introduction[1]

Introduction to argument

This thesis will examine the relationship between women and socially responsible design through a case study of Sustainable Health Enterprises (SHE). Its principle aim is to investigate how women, design, economics and development interact on a global scale, and to explore the emergence of design solutions that are innovative in their attempt to mitigate these various components. By tracing the history of socially responsible design, this thesis aims to uncover how the field addresses women's needs. Prominent gender and design scholars are used as a guide to critically consider such needs and to expand the scholarship of socially responsible design by adding feminist perspectives. This thesis suggests that SHE exposes patriarchal structures of the field by addressing an issue that is distinctly feminine – the need for sanitary pads.

'Women's issues' in contemporary media

Women's issues and needs are often present in mainstream, Western media. Journalists, activists and economists have worked to bring international gender inequality to the fore of global awareness for decades. However, these articles, reports, and texts often focus on the most radical and appalling cases of gender inequality. For example, *New York Times* writers Nicholas Kristof and Sheryl WuDunn recently published a text *Half the Sky: Turning Oppression into Opportunity for Women Worldwide* that chronicles women's international struggle to

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[1] The wording of the thesis title "feminist perspectives of socially responsible design" is inspired by Cheryl Buckley's call for "a feminist critique of design history" in Cheryl Buckley, "Made in Patriarchy," *Design Issues* 3, no. 2 (Autumn 1986): 9.

achieve gender inequality in the developing world.[2] Kristof and WuDunn reveal horrific stories of

injustice committed against women – young girls plucked from or sold by their families into the

sex trade, wives physically abused by their husbands, to name two examples.[3] Nearly every

chapter details such a story suggesting the inequalities to be varying and widespread. Evident in

the book's title, the authors see this injustice as opportunity. They encourage readers to help

women achieve equality and provide guidance for how to become involved.

In another, less mainstream perspective, economist Amartya Sen has written

extensively on the plight of women; much of his work is focused specifically on his homeland of

India. Elements of his research calculate the long-term effects of gender inequality beginning

with male-preference at conception/birth and progressing into favoritism of boys over girls

throughout childhood and into adulthood. As a result, Sen proposed that there are nearly one

hundred million missing women due to such institutionalized gender inequality.[4]

In today's era of civilian uprisings, revolutions, and civil wars,[5] atrocities committed

against women often make headlines in the United States and other Western media. These

articles tell of sexual misconduct, abduction and rape as an expression of political power and

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[2] Nicholas D. Kristof and Sheryl WuDunn, *Half the Sky: Turning Oppression into Opportunity for Women Worldwide* (New York: Vintage Books a Division of Random House, Inc., 2010). See also, Nicholas D. Kristof and Sheryl WuDunn, "The Women's Crusade," *The New York Times*, August 23, 2009, http://www.nytimes.com/2009/08/23/magazine/23Women-t.html?scp=1&sq=the%20women%27s%20crusade&st=cse (accessed January 28, 2011).

[3] Kristof and WuDunn, *Half the Sky*, xi-xxii, 3-16.

[4] For more information on this subject, see Amartya Sen, "Women as Development Problem," *Bulletin of the American Academy of Arts and Sciences* 43, no. 2 (Nov., 1989): 14-29. Page 16 specifically details these numbers. Sen's perspective and writings will be further analyzed in chapter two of this thesis.

[5] In 2011, a number of revolutions took place internationally. Egypt (January, 2011) see "Times Topics: Egypt," *The New York Times,* http://topics.nytimes.com/top/news/international/countriesandterritories/egypt/index.html. Syria (March, 2011) see "Times Topics: Syria," *The New York Times,* http://topics.nytimes.com/top/news/international/countriesandterritories/syria/index.html?8qa. Libya (August, 2011) see "Times Topics: Libya," *The New York Times,* http://topics.nytimes.com/top/news/international/countriesandterritories/libya/index.html?8qa.

dominance.[6] Others expose women's inequality within marriages and patriarchal governments.[7]

These few examples highlight how gender inequality is presented in (Western) media. While it

is essential to bring these injustices to a global consciousness, such atrocity tales may mask the

daily inequalities that women may face. One specific example of such an oversight is women's

need for affordable sanitary pads in many parts of the developing world. Though Kristof has

reported on the prevalence of school absenteeism in girls due to lack of access to affordable

sanitary pads, he recognizes that the subject is taboo and thus difficult to broach. In his *New

York Times* opinion article "Pssst. Does Menstruation Keep Girls Out of School?" he wrote, "It's

considered an indelicate topic and so there's not much discussion of this — and my attempts at

interviews have sometimes horrified my interpreters — but my impression is that there's

something there."[8] Kristof ended the article requesting readers to offer insight on existing

research on the topic; the comments yielded few leads. However, just over a year later, Kristof

published a story in *The New York Times Magazine* detailing the Rwanda/New York-based SHE

and its plan to address menstruation management through its initiative SHE28.[9] The proximity of

these two articles suggests that there may be a rising global awareness of this issue.

Briefly, SHE28, is an initiative launched in Rwanda that provides women with small-scale

loans to develop business ventures that distribute and will later produce sanitary pads made

[6] See for example, Jeffrey Gettleman, "Mass Rapes in Congo Reveals U.N. Weakness," *The New York Times*, October 3, 2010, http://www.nytimes.com/2010/10/04/world/africa/04congo.html (last accessed January 26, 2012).

[7] Kristof and WuDunn, "Women's Crusade"; See also, Susanne Güsten, "Turkish Charity Tells Battered Women How to Save Their Lives -- With a Gun," *The New York Times*, January 18, 2012, http://www.nytimes.com/2012/01/19/world/europe/turkish-charity-tells-battered-women-how-to-save-their-lives-with-a-gun.html?scp=20&sq=women&st=cse (last accessed January 26, 2012).

[8] Nicholas Kristof, "Pssst. Does Menstruation Keep Girls Out of School?" *The New York Times*, September 4, 2009, http://kristof.blogs.nytimes.com/2009/09/04/pssst-does-menstruation-keep-girls-out-of-school/?scp=7&sq=sanitary%20pads&st=cse (last accessed January 30, 2012).

[9] Nicholas Kristof, "D.I.Y. Foreign Aid Revolution," *The New York Times Magazine*, October 10, 2010, http://www.nytimes.com/2010/10/24/magazine/24volunteerism-t.html?_r=2&pagewanted=all (last accessed January 25, 2012).

from local materials. This solution aims to provide women with affordable sanitary pads, but

also access to education and a sustainable livelihood through business development. The

evolution of this project will be discussed in full detail in chapter three.

Reading this thesis

In order to critically consider how socially responsible design considers women's needs,

this thesis is organized into three chapters. The first chapter charts a history of socially

responsible design. Although many consider Victor Pananek's seminal work *Design for the Real

World*[10] to be the field's founding text,[11] this section briefly introduces earlier designers who

employed social consciousness. This section analyzes Papanek's text and his criticism of

contemporary designers and industry. The discussion continues by reviewing the work of Nigel

Whiteley, a design historian and scholar whose text, *Design for Society*,[12] continues Papanek's

conversation. This chapter proceeds to discuss additional scholars and design thinkers who have

contributed to the establishment of a socially responsible design field, notably Victor Margolin[13]

and design consultancies like IDEO.[14] The chapter discusses the role of recent exhibitions that

highlight the need for and the existence of socially conscious design. Such contemporary

perspectives are included to emphasize that the field is still evolving and establishing its place in

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[10] Victor Papanek, *Design for the Real World: Human Ecology and Social Change*, introduction R. Buckminster Fuller (New York: Pantheon Books, 1971).

[11] Victor Margolin and Sylvia Margolin, "A 'Social Model' of Design: Issues of Practice and Research," *Design Issues* 18, no. 4 (Autumn, 2002): 24. Margolin and Margolin note that this claim originates in a post Industrial Revolution design industry.

[12] Nigel Whiteley, *Design for Society* (London: Reaktion Books, Ltd, 1993).

[13] Margolin and Margolin. See also Victor Margolin, "Design for a Sustainable World," *Design Issues* 14, no. 2 (Summer, 1998): 83-92.

[14] Tim Brown and Jocelyn Wyatt, "Design Thinking for Social Innovation," *Stanford Social Innovation Review* (Winter 2010): 30-35.

design history. This section concludes with a brief mention of the role of global economic development to suggest that this field has impacted the role of design within a global context.

The second chapter analyzes socially responsible design through a feminist lens. By returning to material from the first chapter, this section further examines how such founding texts failed to fully address women's needs. While some scholars such as Whiteley did emphasize the importance of Western feminist design, he did not consider women within the field of socially responsible design or in developing countries. Using gender and design scholars such as Penny Sparke, Cheryl Buckley, Pat Kirkham and the Matrix group, this chapter aims to problematize how women's needs are addressed within socially responsible design practice. The field does not ignore women, but this section argues that specific needs are being favored: needs that view women primarily as users or producers to benefit the family or community. This section highlights women's need for basic health initiatives and intends to demonstrate how the omission of this need from socially responsible design discourse is detrimental. This chapter briefly investigates how international policy and economics address women's needs, to show that policymaking is conscious of women's needs (though still within the confines of patriarchal structures). This chapter ends by briefly discussing SHE and other socially responsible design projects to analyze each through a feminist lens.

The third and final chapter details the evolution, goals, and methodology of SHE, a social enterprise organization whose first initiative, SHE28, provides women with small-scale loans to establish businesses that will produce and sell sanitary pads made from local materials. Other organizations also work to provide affordable sanitary pads to women and this section introduces such projects for comparison. To consider SHE's position within socially responsible design, this section presents projects that address women's needs such as health kits, water vessels, and craft-centered endeavors (the aims of these projects will be introduced in chapter

two and their methodology will be detailed further in chapter three). This list is not exhaustive, but begins to reveal how socially responsible design typically benefits women in an effort to call attention to women's *basic* health needs that are unmet and thus add feminist perspectives to the field.

As this thesis argues that SHE challenges patriarchal structures of socially responsible design, it is important to define this terminology for aid in reading this work. Numerous historians and scholars have contested the term 'patriarchy'. It is not singular or constant to a specific region, country, or place and it exists in varying degrees depending on culture.[15] A dynamic definition stemmed from *Patriarchy and Economic Development: Women's Positions at the End of the Twentieth Century*, stating, "In the broader concept, patriarchy is used as a term for characterizing the society which is dominated by men, within the family and outside. It characterizes a society that reproduces male dominance in all areas of its life, in education, work, and in its socio-political institutions."[16] Such a definition should be borrowed for the purposes of this thesis.

The chapters are organized deliberately. Beginning with the history of socially responsible design and continuing with a feminist investigation of the field will help set the framework for a case-study analysis. This thesis will culminate with a discussion of SHE's complex design initiative to complete a critical and gendered analysis of socially responsible

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[15] Sylvia Walby, "Theorisizing Patriarchy," *Sociology* 23, no. 2 (1989): 213-234. Walby defines patriarchy "as a system of social structures, and practices in which men dominate, oppress and exploit women" (214). Gwen Hunnicutt, "Varieties of Patriarchy and Violence Against Women: Resurrecting 'Patriarchy' as a Theoretical Tool," *Violence Against Women* 15, no. 5 (May 2009): 553-573. Hunnicutt discusses the recent debate in definitions and theories of patriarchy. Deniz Kandiyoti, "Bargaining with Patriarchy," *Gender & Society* 2, no. 3 (September 1988): 274-290. For a recent overview and history and debates of patriarchy see Danijela Majstorović and Inger Lassen, *Living With Patriarchy: Discursive Constructions of Gendered Subjects Across Cultures* (The Netherlands: John Benjamin Publishing, 2011), 1-3.

[16] Valentine M. Moghadam, ed. *Patriarchy and Economic Development: Women's Positions at the End of the Twentieth Century* (New York: Oxford University Press, 1996), preface.

design. SHE is a valuable project for this investigation because its initiative SHE28, in part, addresses the exclusively female need of sanitary pads. Though SHE will not be detailed fully until the end of this thesis, readers should be mindful of its approach throughout. This arrangement shows SHE as a representative project in which to critically challenge socially responsible design's consideration of women's needs. This thesis does not claim to prove that SHE is the *best* solution to achieving female equality or equal access to opportunity, but it does expose a gap within socially responsible design discourse.

Literature Review

This section will briefly introduce some of the key texts from the fields of socially responsible design and gender and design theory; such texts were essential to the formation of this thesis. While these texts are discussed in more detail in the following chapters, this will help provide an outline for the sources that have contributed to the shaping of this argument.

Socially Responsible Design

Victor Papanek's 1971 text *Design for the Real World* details his concern for the state of the design field. Though his diatribe polarized his contemporaries, this perception has become more favorable since its initial publication.[17] Papanek called for a reconfiguration of the design industry, one that focused on cultural immersion and education as well as design to meet basic needs. Though he detailed some of the needs of developing countries, his text was predominantly developed-world focused. Papanek wrote, "The nearly 75 percent of the world's people who live in poverty, starvation, and need would certainly occupy still more time in the already busy schedule of our theoretical office. But not only the underdeveloped and emergent

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[17] Martina Fineder and Thomas Geisler, "re_viewing design writing: Design Criticism and Critical Design in the Writings of Victor Papanek (1923-1998)," *Journal of Design History* 23, no. 1 (2010): 99-106.

countries of the world have special needs."[18] Though Papanek had a positive outlook through

participatory design and re-focused education initiatives, his consideration of women's needs

was underdeveloped. This oversight exposes a gap within the field of socially responsible design

and suggests that from its onset, it developed from a patriarchal perspective.

Design historian Nigel Whiteley wrote his text *Design for Society* more than twenty years

after Papanek's first edition of *Design for the Real World*. Whiteley historically situated

alternative design fields that address marginalized 'groups' such as the environment or women.

For example, he divided his text into four categories and five chapters: Consumer-led design,

Green Design, Responsible Design and Ethical Consuming, Feminist Perspectives, The Way

Forward?[19] Whiteley provided valuable insights into the fields of sustainable design and eco-

friendly, "green" design, but he also called for a re-design of consumer practices. He detailed

and contextualized the rise of a social consciousness in design citing important publications and

conferences that contributed to a global, environmental awareness. It is noteworthy that

Whiteley added feminist perspectives to the design industry by examining women's role as user

and consumer. He also stressed the importance of products geared towards women, though his

analysis was limited to women in the developed world. [20]

Victor Margolin has proven a key scholar in the development of socially responsible

design. Margolin works in Design Studies as well as History and thus has insightful perspectives.

In 1998, Margolin published "Design for a Sustainable World,"[21] an article that chronicled the

history of socially responsible design and referenced some of the field's main practitioners and

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[18] Papanek, 55.

[19] Whiteley, Table of Contents.

[20] Ibid., 134-157.

[21] Margolin, "Design for a Sustainable World."

thinkers. Although he considered the work of practitioners such as Papanek and Gui Bonsiepe[22]

to be influential, Margolin failed to see their sustained impact.[23] In this article, he called for a

reconfiguration of the industry, writing, "The primary question for the design professions thus

becomes not what new products to make, but how to reinvent design culture so that

worthwhile projects are more clearly identified and likely to be realized."[24] Margolin continued

to critique the design industry and ended his article with the ominous projection that another

industry will solve the world's problems if designers do not actively work to change their role

within society.[25] In a 2002 article written in collaboration with Sylvia Margolin, Margolin and

Margolin began with a brief introduction to socially responsible design's trajectory. This article

considered how product design development could become more successful by incorporating

various fields and perspectives in the design process. This article is important for it encourages a

shift away from the designer as an all-knowing, sole creator to a design.[26]

Cynthia Smith is a curator of socially responsible design at the Cooper-Hewitt, National

Design Museum in New York and has developed a series of exhibitions presenting projects that

address the needs of the "other 90%," the majority, but the most commonly underserved

population. The first exhibition, *Design for the Other 90%*, was launched in 2007 was quite

successful; it traveled extensively and the accompanying catalogue just entered its seventh

printing edition.[27] In the fall of 2011, Smith organized the series' second installment: *Design with*

the Other 90%: CITIES, an exhibition that explored design solutions emerging from the world's

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[22] Gui Bonsiepe will be discussed in further detail in chapter one.

[23] Margolin, 84, 85.

[24] Ibid., 86.

[25] Ibid., 92. Margolin's direct quote; "If the will exists among designers, it will surely be possible to reinvent industrial design. If it doesn't, designers will simply become part of the problems whose solutions other professions will need to invent."

[26] Margolin and Margolin, "A 'Social Model' of Design," 24-30.

[27] Cynthia Smith, *Design for the Other 90%* (New York: Smithsonian Institution, 2007).

rapidly growing cities in the Global South.[28] Smith's exhibitions and accompanying catalogues

explore grass-roots design solutions to environmental, transportation and sanitation problems

(to name a few). These shows are emblematic of a growing interest in design in the developing

world, but also a recognition that design solutions can emerge in non-traditional ways and do

not necessarily require a formal design education. While there are a number of other exhibitions

that have been developed in the past decade, this series is important for its attention to design

solutions emerging from developing countries.

Gender and Design

A number of gender and design texts helped to shape feminist perspectives of socially

responsible design. Although no texts were referenced (or found) that specifically addressed

women within the field of socially responsible design, the following scholars proved helpful in

shaping an analysis and critique of its scholars and practitioners.

In the 1980s, a group of female architects formed the Matrix group as a way to critically

analyze how women engaged with the built environment. In the opening pages of the text, the

group stated, "We are not prescribing the solution; we are describing a problem, so as to help

women understand their own relationship to the built environment and to help architects

understand how the environment *is* a problem for women."[29] The text was critical of the

architecture industry: they viewed architects as a homogenous group (white, male, middle-class)

and noticed that female architectural students suffered from preconceived notions of

femininity.[30] The text progressed by analyzing various aspects of the built environment and

women's relationship to it. The problems with architecture, they argued, stemmed from

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[28] _____, *Design with the Other 90%: CITIES* (New York: Smithsonian Institution, 2011).

[29] Matrix, *Making Space: Women and the Man-Made Environment*, (London: Pluto Press, 1984), 8.

[30] Ibid., 13, 22.

alternative priorities and an incomplete understanding of the needs of its users.[31] Thus, the

Matrix group's perspective added to a critique of socially responsible design for their attempt to

define seemingly invisible or unidentifiable problems.

Cheryl Buckley's 1986 article "Made in Patriarchy" is a seminal article in the

development of gender and design history.[32] Buckley challenged the construction of design

history to call attention to the patriarchal constructs that have shaped and determined women's

role in design throughout history.[33] Buckley critiqued the methodological approach of design

history that considered the designer *in vacuo* and failed to consider the contribution of

consumption and production to a design.[34] Buckley's argument was central to the development

of a feminist addition to socially responsible design for it encouraged a direct inquiry of

perceived values and expectations. Buckley's argument forced a critical consideration of a field's

assumptions. By challenging such assumptions, one can work to form a more inclusive history –

one that addresses the needs of both women and men.

Penny Sparke's text *As Long as it's Pink* offered a critical analysis of the ways in which

"feminine culture…had been relegated to the margins"[35] falling second to masculinity. Sparke

found gender to be central to a critical understanding of material culture. She also questioned

the roles of production and consumption in design history.[36] Her critique spanned the ideas of

modernity and analyzed how its constructs were developed and realized. This specific analysis

proved indirectly useful for this thesis because it demonstrated how particular objects can

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[31] Ibid., 14-15.

[32] Cheryl Buckley, "Made in Patriarchy," *Design Issues* 3, no. 2 (Autumn 1986): 3-14.

[33] Ibid., 4.

[34] Ibid., 11.

[35] Penny Sparke, *As Long as it's Pink: The Sexual Politics of Taste* (California: Harper Collins Publisher, 1995), ix.

[36] Ibid.

impact a certain group's role in modernity. While Sparke's analysis stemmed from a Western perspective, some of her theoretical projections translated to socially responsible design.

Chandra Talpade Mohanty's text *Feminism Without Borders* was particularly useful in understanding the complexities of international feminism. Mohanty discussed the danger in presenting "Third World women" as a unified, homogenous group with the same problems, advantages and disadvantages.[37] Mohanty's text was particularly useful to be conscious of Western perspectives on a marginalized or 'other' group when discussing or assuming larger women's needs.

The Gendered Object, edited by Pat Kirkham, challenged societal perceptions of normalcy within objects, as well as constructed notions of femininity and masculinity.[38] This collection of essays included work from various scholars who critically engaged with how gender impacts our world of objects. Kirkham's compilation encouraged the reader to reexamine everyday objects to question how and why each became gendered and how such gendering impacts our interaction with the object. Although this text was not particularly relevant to adding a feminist voice to socially responsible design, it is nevertheless an important text within the gender and design field.

Design and Feminism: Re-Visioning Spaces, Places, and Everyday Things emerged from a conference that was held at the City University of New York in the fall of 1995.[39] Edited by Joan Rothschild, this compilation contained twelve articles that addressed women's needs in the built environment, urban landscape, graphic design, industrial design and participatory design.[40] The

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[37] Chandra Talpade Mohanty, *Feminism without Borders: Decolonizing Theory, Practicing Solidarity* (Durham; London: Duke University Press, 2003), 17-24.

[38] Pat Kirkham, ed., *The Gendered Object* (Manchester: Manchester University Press, 1996), 1.

[39] Joan Rothschild, ed., *Design Feminism: Re-Visioning Spaces, Places, and Everyday Things* (New Jersey: Rutgers University Press, 1999), 1.

[40] Ibid., 2.

text addressed the complexity of the relationship between design and technology and how this delineation impacts gender; its contributors challenged the status quo within their specific field.[41] This book was useful for its terminology and perspective, and demonstrated useful ways to critique and analyze a specific field with the aim to add feminist perspectives.

Concluding remarks

In conclusion, by examining and utilizing the above texts, this thesis will help contribute feminist perspectives to the field of socially responsible design. Using the support of gender and design scholars to critically consider the contributions of socially responsible design polemics, historians and projects, this thesis will help to problematize women's perceived needs in the field. This thesis will not critically analyze women as practitioners or scholars specifically, but will focus solely on women's needs as the user, producer, beneficiary, and/or owner. As chapters two and three demonstrate, there are many socially responsible design projects and organizations that address various women's needs. These initiatives vary in their public acclaim and thus indirectly reflect the priorities and history of the field. This introduction of projects will provide the framework for historical and feministic perspectives of socially responsible design.

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[41] Ibid., 1-6.

Chapter One: A History of Socially Responsible Design

Introduction

This chapter will chart the emergence of a social consciousness among design

practitioners and will chronicle the design historians who have contributed to the development

of socially responsible design. It will also begin to consider how this field has addressed

women's needs and will problematize its view of women's roles in society. This chapter will end

with a discussion of how the once disparate fields of economic development and design have

begun to converge to address international issues.

Socially responsible design practice and scholarship

In order to discuss the emergence of socially responsible design, it is important to

contextualize the changes that have rapidly influenced society. In the past two hundred years,

the global population has been exponentially increasing. In 1804, the world's population

reached one billion people; since 1960, the population has doubled reaching seven billion in the

fall of 2011.[1] This unprecedented and rapid growth has led to unforeseen complications; issues

that policy makers, economists and designers have been attempting to solve for decades.

The Industrial Revolution introduced machinery into everyday life and the world began

to move faster with the development of high-speed travel. Factory jobs and mass-produced

goods became commonplace and with that, a working class formed in urban centers as many

escaped rural living for employment opportunities in cities. Rapid urbanization led to unhealthy

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[1] UNFPA, *State of the World Population 2011: People and Possibilities in a world of 7 billion* (New York: United Nations Population Fund, 2011), 2-3.

living conditions for a majority of urbanites.[2] This migration to urban centers still exists in the twenty-first century as more than half of the world's population resides in cities. And the problems of urbanization are often felt most in the world's developing countries.[3]

Social consideration was previously inherent in design practice, however the Industrial Revolution began to shift priorities away from the handmade guild practice towards mass production for profit. Nineteenth-century design reformers such as A.W.N. Pugin and William Morris lived at the height of the Industrial Revolution and witnessed the denigration of products and production conditions in factories. They called for a change in the manufacturing of goods in response to problematic working and living conditions. Pugin and Morris were concerned with how mass-produced, poorly made goods of the industrialized world were going to impact the country and the morale of its citizens. Both called for a return to a medieval model of production, where goods were handmade and the worker was connected to the object he created.[4] Simply stated, Pugin was concerned with the moral and religious implications of design through a truth to materials and production, while Morris was concerned with a design's social impact, the environment, and how production conditions affect workers.[5]

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[2] For an early reference on the impact of mid-twentieth century globalization in the world's developing, post-colonial countries, see Geoffrey K. Payne, *Urban Housing in the Third World* (London: Leonard Hill; Boston: Routledge & Kegan Paul, 1977).

[3] For a contemporary reference, the Cooper-Hewitt, National Design Museum recently launched an exhibition that explores design solutions for the world's rapidly urbanizing population. Cynthia Smith, *Design with the Other 90%: CITIES* (New York: Smithsonian Institution, 2011). See also Robert Neuwirth, *Shadow Cities: A Billion Squatters, A New Urban World* (New York: Routledge, 2005).; Mike Davis, *Planet of Slums* (London: Verso, 2006).

[4] The use of "he" here is intentional as most guilds and workshops of the medieval period were exclusively male.

[5] For more information on AWN Pugin, see Megan Brewster Aldrich and Paul Atterbury, *AWN Pugin: Master of Gothic Revival* (New York: Bard Graduate Center for Studies in the Decorative Arts, 1995). For more information on Morris, view his manifesto, William Morris, "The Lesser Arts, 1877" in *The Industrial Design Reader*, ed. Carma Gorman (New York: Allworth Press, 2003), 35-40.; see also Diane Waggoner, ed. *The Beauty of Life: William Morris and the art of design* (London: Thames & Hudson, 2003).

The mid-twentieth century saw architects that considered the social benefits of the built environment. Philosopher, architect, and design thinker, Buckminster Fuller, worked to instigate change through education, experience, and architecture. His design for the geodesic dome radically reconsidered how individuals conceived of and interacted in constructed space. Fuller's concepts for a better world were seen through his World Game, an interactive educational experience that invited players to visualize their impact on the entire world through scaled-down maps morphed to reflect population, wealth, ownership, and other factors. The game was designed so that players would understand the cause and effect of individual actions. Fuller was innovative for his ability to communicate the influence of one individual on the entire world.[6] As historian Nigel Whitely explained, "[d]esign, Fuller believed, could solve the world's problems if it dealt with the real issues and concerns, rather than the phoney desires dreamt up by capitalist manufacturers and their 'lackeys'…industrial designers."[7] Though many of Fuller's designs were not absorbed by mainstream society, his problem-solving approach influenced the social design innovators that succeeded him.

Beyond individual designers, there were also global events that influenced how people perceived the world. Towards the end of the 1960s, a large environmental movement was spawned internationally as space travel enabled the world's population to understand that it was one part of a large, expansive ecosystem. *The Whole Earth Catalogue*, which published articles by activists such as Fuller, highlighted the impact of human activity on the environment and helped to ignite activism in many young environmentalists.[8] Just four years later, there was

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[6] For more information on Buckminster Fuller, see Thomas T.K. Zung, ed., *Buckminster Fuller: Anthology for a New Millennium* (New York: St. Martin's Press, 2001).; see also R. Buckminster Fuller, "Fifty Years Ahead of My Time," *The Saturday Evening Post* (March 1977): 44, 104.

[7] Nigel Whiteley, *Design for Society* (London: Reaktion Books, Ltd, 1993), 95.

[8] Fuller's Dymaxion designs were featured in the "Whole Systems" section of the *Whole Earth Catalog* as well as his poem, "No More Secondhand God." For more information, see Andrew G. Kirk, *Counterculture*

another environmental milestone in the *Only One Earth* conference in Stockholm. This conference and accompanying catalogue forced the reader to comprehend the closed-loop system of the earth's ecosystem. It taught readers that the earth was a finite resource where individual actions had long-lasting, global impact.[9] Thus, a return to design for sustainability seemed like a logical shift for the design industry. This heightened global awareness encouraged many economists, politicians, developers, designers, students, and philosophers, etc. to react to the state of the world.[10]

Such global awareness, conferences, and events began to slowly seep into the design industry. Industrial designer, Victor Papanek, saw the degradation of the global environment as a direct result of his profession.[11] As a result, Papanek called for a change in his text, *Design for the Real World*, and the field of socially responsible design began to emerge.[12] Though many credit Papanek with the development of this field, it is evident that previous designers were conscious of the social implications of design and its impact on the world, environment, and behavior.

Though not the first critic to consider design's impact on society, Papanek was one of the first to call for a complete industry change. In his preface, he suggested the eradication of the design industry stating, "In an environment that is screwed up visually, physically, and

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Green: The Whole Earth Catalog and American Environmentalism (Kansas: University Press of Kansas, 2007), 7.

[9] Friends of the Earth, *The Stockholm Conference: Only One* Earth (London: Earth Island Limited, 1972).; Whiteley, 49;

[10] Whiteley, 48, 94.

[11] Victor Papanek, *Design for the Real World: Human Ecology and Social Change*, introduction R. Buckminster Fuller (New York: Pantheon Books, 1971).

[12] Though Papanek's text has been critically acclaimed in the forty years since its release, there was a backlash of criticism from his contemporary designers and critics. In 2010, Martina Fineder and Thomas Geisler published a short article in the *Journal of Design History* detailing the transformation of public perception of Papanek and his text. See Martina Fineder and Thomas Geisler, "re: viewing design writing: Design Criticism and Critical Design in the Writings of Victor Papanek (1923-1998)," *Journal of Design History* 23, no. 1 (2010): 99-106.

chemically, the best and simplest thing that architects, industrial designers, planners, etc. could

do for humanity would be *to stop working entirely*."[13] Though extreme, this statement

exemplified Papanek's belief that designers, specifically industrial designers, were seriously and

irrevocably contributing to the deterioration of society and the environment. He continued,

however, by stating, "in this book I take a more affirmative view: It seems to me that we can go

beyond not working at all, and work positively. Design can and must become a way in which

young people can participate in changing society."[14] Papanek held all industrial designers

accountable and began to consider the design industry from a holistic perspective. It is

important to note, however, that differing circumstances necessitate varying results.

Nineteenth-century designers were not confronted with the same challenges as those in

Papanek's generation. Designers like Morris and Pugin could focus on morality or the social

welfare of a worker because they were not faced with the exponential population growth and

the overabundance of mass-produced machines, products, and synthetic materials that define

the second half of the twentieth century.

Considering design holistically, Papanek addressed food, shelter and clothing, but also

encouraged designers to design for more basic needs like clean air and water – resources rapidly

disappearing worldwide.[15] According to Papanek, "[d]esign is a luxury enjoyed by a small clique

who form the technological, moneyed and cultural 'elite' of each nation."[16] He was troubled by

design's exclusivity towards specific groups. To escape the narrow confines of his industry,

Papanek encouraged its reexamination, not just of things or individual designed objects, but the

entire system. Such a metamorphosis was essential, as he understood the consequences of an

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[13] Papanek, xxv-xxvi.

[14] Ibid., xxvi.

[15] Ibid., 46.

[16] Ibid., 50.

expanding society. He wrote, "[w]hen we consider what a large population increase *does*, we find that it forces us into devising new ways of doing things because the old ones cannot work any more at all."[17] Because of this shift, Papanek believed that reform should begin in education.[18] So strong was his conviction that he devoted the last two chapters[19] to the role of education and "integrated design" or design as "unity."[20]

Though much of Papanek's work referenced designs needed in developed countries, he encouraged designers to shift their focus to developing and emerging economies in the "Third World."[21] He encouraged designers to interact with societies in developing countries to understand their needs, but also recommended that they educate such societies to create self-sustaining design communities, not reliant on the developed world.[22] To help focus this additional sector, Papanek detailed the needs of the developing world: "power sources, light sources, cooling and refrigeration unites, vermin-proff grain storage facilities, simple brick-making and pipe-making systems… communication systems, simple educational devices, water filtration, and immunization and inoculation equipment."[23] Papanek's list was no doubt beneficial because such needs were invisible to most in developed societies. However, such a list can be problematic. From its beginning, socially responsible design was, in its own way, exclusive, for when needs are defined specifically, this can exclude other areas of exploration.

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[17] Ibid., 232.

[18] "Industrial and environmental design are one of the few fields in which the schools are ideologically in the forefront of the profession." Ibid., 211.

[19] These final chapters are titled: Chapter 12: Design for Survival and Survival Through Design: What can we do? and Chapter 11: The Neon Blackboard: The education of designers and the construction of integrated design teams.

[20] Papanek, 254-6.

[21] Papanek uses the term "Third World" to define what is referred to in the twenty-first century as "Global South" or "developing world".

[22] Papanek, 71.

[23] Ibid., 124-125. Immediately following this list, Papanek concluded that "…most of the needs of the Third World will have to be solved there."

Throughout the rest of his text, Papanek criticized contemporary design practice and continued to outline what was needed in a newly designed world. He focused on education, transportation, improving access to basic necessities, consumption, collaborative processes, etc.[24] Where Papanek's argument stopped short was in its consideration of women - even his language was exclusive. For example, the first sentence of the first chapter read: "All men are designers."[25] This sentence set the tone for the entire text, which guided designers, presumably male, on what to design for the world. Papanek was inarguably well intentioned, but such an approach was problematic for it reinforced exclusive patriarchal perspectives.[26] In 2004, Dean Nieusma published "Alternative Design Scholarship: Working Toward Appropriate Design,"[27] a *Design Issues* article that explored scholarship on "design for marginalized groups" such as "universal design, participatory design, ecological design, feminist design and socially responsible design."[28] Nieusma's article proved useful to critically explore how Papanek's text discussed and prioritized groups. Socially responsible design works to meet the needs of marginalized groups – elderly, disabled, or economically depressed – those that were not considered by designers historically. Nieusma helped to further develop this focus and perception stating,

> Design for marginalized social groups requires paying attention to the deceptively
> complex fact that different people have different needs….this fact is obvious to every

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[24] See Papanek, *Design for the Real World.* Education, 56-57, 63-70, 244-312 (mentioned throughout text). Transportation, 171-177. Access to basic necessities, 46. Conspicuous consumptives, 212-243. Collaborative process discussed 185-187.

[25] Ibid., 3.

[26] John A. Walker notes the same problem with Papanek's wording in his text John A. Walker, contribution by Judy Attfield, *Design history and the history of design* (London: Pluto Press, 1989), 31-32.

[27] Dean Nieusma, "Alternative Design Scholarship: Working Toward Appropriate Design," *Design Issues* 20, no. 3 (summer 2004): 13-24.

[28] Ibid., 14.

designer, of course, because imagining needs is fundamental to design, and the needs that designers target frequently are not the ones they experience themselves.[29]

To consider women within this context adds a second layer of marginalization. Nieusma discussed feminist design[30] and socially responsible design as two different entities, so to combine these fields builds the complexity. Nieusma argued that "[f]eminist design theorists criticize dominant design practice for mirroring and thus reinforcing broader sexist cultural forces."[31] As the next chapters will detail, many socially responsible design projects that focus on women do so through the act of water gathering, prenatal care or craft production. Since women are oftentimes only viewed in such roles, how does this limit women's potential impact? Women are not presented as independent or powerful, but as nurturers or decoratively creative. Though these roles are important culturally and financially and must exist, this narrowed view can impede women from discovering alternative roles in society. Nieusma cited scholars like Papanek as crucial to the understanding of socially responsible design. He wrote, "Papanek calls on designers to take responsibility themselves for moving beyond narrow market considerations and to design products genuinely needed by humanity."[32] However, it is important to consider how Papanek's suggestions encouraged design within the confines of patriarchal structures. Although Papanek did discuss needed health initiatives (where most women are discussed in contemporary social design when addressing pregnancy or the spread of HIV/AIDS), he focused rather on the needs of the developed world hospitals,[33] or the indirect health needs such as

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[29] Ibid.

[30] Nieusma states, "Feminist design considers the relationship between the built world and the position of women in society. Feminist design theorists criticize dominant design practice for mirroring and thus reinforcing broader sexist cultural forces. They show how gendered power relations become embedded in material objects." Nieusma, 19.

[31] Ibid., 19.

[32] Ibid., 22.

[33] Papanek, 230.

food storage or water filtration.[34] Herein lies an initial problem within the field. Women were

rarely mentioned and their basic needs were unknown and thus unmet.

Another profound voice in the history of socially responsible design is Gui Bonsiepe, a

German designer who worked to meet the needs of underserved people through design in

South America.[35] Bonsiepe was contemporary to Papanek, but worked to bring his design

practice to the places where it was underdeveloped. In 1976, the Royal College of Art organized

a symposium entitled *Design for Need: The Social Contribution of Design*. The symposium called

on designers like Papanek and Bonsiepe to help establish definitions and solutions for the

growing interest in design for need.[36] In his speech, Bonsiepe called attention to the needs of

non-traditional or peripheral groups. He also indirectly defined the needs of groups in

developing countries, writing, "The realities of dependent countries present the discomforting

and depressing aspects of human life – or better, of attempts at human survival: lack of shelter,

lack of food, lack of productive work, lack of sanitation in growing urban agglomerations, lack of

adequate tools and machines."[37] Bonsiepe stressed that the best way to meet such needs was

through local materials and technologies. He encouraged designers not only to provide design

solutions, but also education initiatives to create self-sustaining communities.[38] Bonsiepe

continues to be prolific regarding design solutions in and by industrialized nations, and stresses

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[34] Ibid., 124-125.

[35] Gui Bonsiepe, "Precariousness and Ambiguity: Industrial Design in Dependent Countries," in *Design for Need: The Social Contribution of Design. An anthology of papers presented to the Symposium at the Royal College of Art, London, April 1976,* ed. Julian Bicknell and Liz McQuiston, (London: Pergamon Press, 1977).

[36] Ibid.

[37] Ibid., 14.

[38] Ibid., 17.

how democracy can be achieved through design, however his work is often overlooked in design history.[39]

In 1993 design historian Nigel Whiteley published *Design for Society*, a brief but dense text that addressed major design concerns in four chapters: consumer-led design, green design, responsible design and ethical consuming, and feminist perspectives.[40] Although Papanek and Whiteley emerge from disparate fields – designer and historian respectively – Whiteley adopted a similar tone to Papanek's by introducing his book with key points of contextualization. The early 1990's wake of economic crisis in Britain was preceded by a decade of immense growth in the design industry. Whiteley described his perspective on the fall, writing, "… the design boom became its own worst enemy and choked on the froth of its own hype. Far from being the basis of the *solution* to society's problems, it became increasing apparent that design – that is, 'market-led' or 'consumer-led' design (as it is commonly called) – was one of society's *problems*."[41] Much like Papanek's credo of "designers should stop working entirely," Whiteley blamed design industry as a contributor to societal and economic turmoil. He charted critical design perspectives in recent history to help frame his argument for an industry change.[42] Whiteley held the designer responsible for promoting mass-consumption and was critical of minor design adjustments dubbed "creative"[43] if the changes existed solely for economic gain.

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[39] See for example, James Fathers and Gui Bonsiepe, "Peripheral Vision: An Interview with Gui Bonsiepe Charting a Lifetime of Commitment to Design Empowerment," *Design Issues* 19, no. 4 (Autumn 2003): 44-56.; and Gui Bonsiepe, "Design and Democracy," *Design Issues* 22, no. 2 (Spring 2006): 27-34.

[40] See Whiteley, Table of Contents.

[41] Whiteley, 1.

[42] Ibid., 1-6.

[43] Ibid., 2-3. On just the third page of his introductory text, Whiteley outlined his premise for writing. It is worth fully quoting to grasp his purpose and aims for the text. "The design profession needs to be both introspective and outward-looking. It must look at its practices and values, and their implications; and it must look at the condition of society and the world. Designers can no longer take refuge from responsibility for their own actions and continually repackage the same old type of consumer goods at a

Rather he encouraged an ethical and moral reconsideration of "consumer-led design" practice, one that acknowledged and did not exploit the earth's finite resources.[44]

Design for Society also historically traced the beginnings of environmental awareness in the modern world with texts such as *Silent Spring* and the *Only One Earth* catalogue. While such works forced readers to consider the earth as an interconnected ecosystem, many mainstream readers were dubious. People did respond, Whiteley notes, when such environmental matters were commodified into 'green' design.[45] While the 'green' design movement gathered support, Whiteley commented, "in the context of our high-consumption, marketing-orientated, capitalist society, the 'Green consumer' is – almost invariably – first and foremost a consumer, and only nominally Green."[46]

Whiteley expanded his critique and suggested that real change required an ideological shift in consumer practice to differentiate between want and need, as well as the formation of an ethical focus within the design industry.[47] But he was slightly pessimistic as he opened the chapter, "Responsible Design and Ethical Consumering", stating "… if history is a reliable guide, socially useful production is always on its way but seldom arrives, thwarted by the values of the consumerist society."[48] Whiteley goes on to discuss both the 1971 and 1985 editions of Papanek's *Design for the Real World* as well as the public and design industry's reaction to it.[49]

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time when issues about consuming and its relationship to the world's resources and energy need urgently to be acted upon." (p. 3)

[44] Ibid., 3.

[45] Ibid., 47-54.

[46] Ibid., 53.

[47] Ibid., 59-62, and Chapter 3, "Responsible Design and Ethical Consuming."

[48] Ibid., 94.

[49] Ibid., 98-107.

While he addressed the impact and influence of Papanek's texts, Whiteley made his own claims about socially responsible design.

Whiteley directed attention toward design in the Third World. He explained the disparity between the developed world's design solutions for the developing world and the reception of such designs. Many feel marginalized and forced to use products that the developed world would not, while developed countries in the West consider any designed object suitable for poorer nations, regardless of stylistic or cultural consideration. Whiteley wrote, "Even if the dilemma of design in a Third World country is resolved in favor of socially responsible design, the designer has the difficult task of conceiving products and processes which are not only socially desirable but also culturally appropriate."[50] Even though designers encouraged developing countries to use socially responsible designs, as Whiteley emphasized, globalization has already occurred, thus even the world's remote villages experience the abundance and mass consumption of the West through television and mass media.[51] He ended this chapter with a discussion of ethical investments and consumption and called for full disclosure from corporations, but also placed responsibility on the consumer to judge products not just for aesthetics or popularity, but on moral and ethical grounds.[52] His closing argument stated that if designers did not develop an ethical code in their profession, then "design will

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[50] Ibid., 119. Whiteley further explained that "design – whether concerned with socially responsible products or even consumerist luxuries – is a cultural activity in which meaning and identity relative to a group, society or country are essential considerations" (p. 122). Please recall that Papanek emphasized a similar point when he instructed designers to travel to countries to understand need. He then encouraged training of local artisans in order to create a self-sustaining design community that can work for its community. Papanek, 71.

[51] Whiteley, 118-9.

[52] Ibis., 123-131.

remain a problem-creating activity."[53] Whiteley, like Papanek had an apocalyptic view of the design profession if immediate action was not taken.

Unlike Papanek, Whiteley also devoted an entire chapter to women, entitled "Feminist Perspectives." This chapter highlighted women as a marginalized group in need of design consideration. Whiteley historically situated feminist design scholarship and discussed the gendering of design in the Western world in that most products were created by "men (producers) *for* women (consumers) or by men for men."[54] Whiteley did not breach the subject of women in the developing world, but his perspectives on how objects are designed for women will prove useful in discussing the role of women in design in the next chapter.

Towards the close of twentieth century, the design profession gained momentum in developing a socially responsible field. In 1998, Victor Margolin, a seminal figure in the field of Design Studies, wrote an article for *Design Issues* entitled "Design for a Sustainable World."[55] Margolin's essay recognized major contributors to the field, such as Papanek and Bonsiepe,[56] but he also made additional contributions. He recognized the need for design professionals to rethink their practice, writing, "[t]he primary question for the design professions thus becomes not what new products to make, but how to reinvent design culture so that worthwhile projects are more clearly identified and likely to be realized."[57] This comment suggested that one contributing factor to the design profession's lack of consideration towards alternative needs lies in the reality that such work is ignored and undervalued – or perhaps not even considered within the field of design practitioners.

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[53] Ibid., 133.

[54] Ibid., 141.

[55] Victor Margolin, "Design for a Sustainable World," *Design Issues* 14, no. 2 (Summer, 1998): 83-92.

[56] Ibid., 84; 85.

[57] Ibid., 86.

Like Whiteley, Margolin discussed the perplexing role of the consumer, writing

Design must disengage itself from consumer culture as the primary shaper of its identity, and find a terrain where it can begin to rethink its role in the world. The result of this activity, if successful, will be a new power for the designer to participate in projects for the welfare of humankind, both inside and outside the market economy"[58]

Margolin suggested the emergence of a new, contemporary field – one that considered design from an environmental, social and economic perspective. His essay also began to broaden the type of work that can be created under the design umbrella. Notice Margolin's nomenclature, not *objects* for human welfare, but *projects.* This classification signaled a shift in the industry. Design cannot be limited to the work of merely functional, aesthetically pleasing, technologically advanced products. It must be considered more broadly to include the essential design of systems or projects that help meet basic human needs as well as environmental, social and global issues. Margolin divided these needs into six categories: "quality of life, efficient use of natural resources, protecting the global commons, managing human settlements, the use of chemicals and the management of human and industrial waste, and fostering sustain-able economic growth on a global scale."[59] Margolin concluded his essay encouraging designers to strive for a global perspective, but also critiqued the consumption habits in the developed and developing world. Without industry change, he warned, the earth will not reach a sustainable level and other professions will absorb responsibility for solving the problem.[60]

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[58] Ibid., 88-89.

[59] Margolin extends this list for those fields that hold relevance in design today. Those "include research and development efforts for new and reusable sources of energy, recycling waste products into the world's ecosystems, altering wasteful patterns of consumption, reducing excessive product packaging, developing affordable health care technology for rural settings, designing environmentally safe mass transit systems, creating a new aesthetic for products made of recycled materials, inventing technology to reduce the production of industrial waste, expanding eco-and cultural tourism as new forms of consumption, making more efficient use of forest products, finding alternatives to products that burn fossil-fuels, creating better environmental impact statements for new products, inventing new mechanisms to monitor global resource use, improving methods of recycling waste materials into new products, and assisting indigenous peoples to become entrepreneurs." Margolin, 90-91.

[60] Ibid., 92.

In the middle of the 2000s, the design consultant group IDEO began to reconfigure the
language of design practice. IDEO is known for credible designs such as Apple's computer mouse
and ergonomic chairs, but it also considers design more broadly to include systems, experience
and innovative design. In his 2009 text, IDEO CEO Tim Brown published *Change by Design*, a
compilation that explored the concept of "design thinking" and its relation to the design field.[61]
In 2010, Brown and colleague Jocelyn Wyatt published an article in *Stanford's Social Innovative
Review* that defined design thinking as it related to socially responsible design, or the design for
basic needs in the developing world.[62] The article began with a story of a water collection
program in Hyderabad, India through the lens of a local user – a woman named Shanti (the story
will be paraphrased here). In Hyderabad, women manage the daily collection of water (a
tradition in many cultures); and Shanti was responsible for this task. Shanti and her family chose
not to partake in a new, clean water delivery program offered by a local treatment plant. As an
alternative, water was collected from a "local borehole." Shanti explained that she and her
family passed over the local treatment plant for two reasons. First, the plant only offers water
for sale in five-gallon increments and requires that all water be collected in a standardized
plastic bin. This device is rectangular and cannot be carried on the head or hip, making it
impossible for Shanti to manage the heavy load alone. Her husband works during the plant's
operating hours, so he cannot help carry the water. Second, the plant requires that she
purchase a punch card that provides five gallons of water per day. Since this amount exceeds
Shanti's family needs, she refuses to buy more than necessary.[63] The article proceeded to

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[61] Tim Brown, *Change by Design: how design thinking transforms organizations and inspires innovation* (New York: Harper Business, 2009).

[62] Tim Brown and Jocelyn Wyatt, "Design Thinking for Social Innovation," *Stanford Social Innovation Review* (Winter 2010): 30-35.

[63] This description was paraphrased from Brown and Wyatt, 31-32.

explain how this water treatment facility failed in its overall design consideration for it overlooked the cultural nuances of the community.

Brown and Wyatt continued by exploring the concept of "design thinking," a practice that "incorporates constituent or consumer insights in depth and rapid prototyping, all aimed at getting beyond the assumptions that block effective solutions. Design thinking—inherently optimistic, constructive, and experiential—addresses the needs of the people who will consume a product or service and the infrastructure that enables it." This definition inherently broadens the design field by addressing the need for systems and experience design, not just product design. Such expansions allow organizations like Sustainable Health Enterprises (SHE), for example, to be considered *design*. Its initiative offers solutions to a multitude of problems – sanitary pads, education, ownership and business opportunities for women – using not just a product, but also a system of solutions.

Socially responsible design: the role of exhibitions

In 2002, Victor Margolin and Sylvia Margolin published "A 'Social Model' of Design: Issues of Practice and Research."[64] This article further explored design's efforts to provide access to basic needs and encouraged practitioners to consult various fields during the design process.[65] But Margolin and Margolin also exposed that little social design projects find support from the public. They posed the question, "How might the public's perception of designers be changed in order to present an image of a socially responsible designer?"[66] Since this article was

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[64] Victor Margolin and Sylvia Margolin, "A 'Social Model' of Design: Issues of Practice and Research," *Design Issues* 18, no. 4 (Autumn 2002): 24-30.

[65] "The primary purpose of design for the market is creating products for sale. Conversely, the foremost intent of social design is the satisfaction of human needs. However, we don't propose the 'market model' and the 'social model' as binary opposites, but instead view them as two poles of continuum." Ibid., 25.

[66] Ibid., 28.

written, the social design field has evolved extensively, bringing international issues and needs into design discourse. Museums have begun exhibiting the work of international projects aimed at fulfilling basic human needs through design.

In 2004, Bruce Mau and the Institute without Boundaries (IWB) launched an exhibition and accompanying catalogue entitled *Massive Change*. This exhibition explored the impacts of the growing population and rapid urbanization on a global scale. *Massive Change* presented dynamic designs for the future. It dared to ask questions such as: "Now that we can do anything, what will we do?"[67] Such inquiries were posed throughout the exhibition and had a self-admitted, optimistic perspective. The catalogue stated, "Massive Change is a project that embraces the potential of advanced capitalism, advanced socialism, and advanced globalization. In that sense, Massive Change is obviously ambitiously positive, and might be misunderstood as utopian at first glance. But it is not futuristic. It is about what is already happening."[68] Where Papanek, Whiteley and Margolin saw design's potential demise for failing to act, Mau and IWB saw opportunity and a collective move toward a problem-solving industry. However, like their social design predecessors, Mau and IWB worked to bring contemporary design challenges to the forefront of art and design discourse. They worked to highlight the radical change in the industry – one that shifted away from pure aesthetics and towards the need for dynamic solutions. Most of the exhibition and text addressed how design can change the world (specifically the developed world). When mentioned, the problems of the developing world were discussed in relation to foreign aid donations from developed nations.

Three years later in 2007, Cynthia Smith from the Cooper-Hewitt, National Design Museum in New York City launched *Design for the Other 90%* (DFO90), an exhibition that

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[67] Bruce Mau, Jennifer Leonard, and the Institute without Boundaries, *Massive Change* (Phaidon, 2004), 15.

[68] Ibid., 19.

explored international, replicable solutions for the 5.8 million people that lack access to basic

necessities such as water and shelter.[69] This exhibition was a progressive step towards exhibiting

design solutions to meet basic needs worldwide. By exposing the projects and objects that were

emerging form the design industry to address ensuing problems caused by rapid population

growth and poverty, this exhibition helped solve one of the problems raised by Margolin when

he suggested that such innovative designs are rarely recognized within the industry.[70] Bringing

design projects for the developing world to a museum space and exhibition, demonstrates a

broadening of design industry to include projects that offer solutions to the World's

marginalized, but majority population.

In 2010, the Cooper-Hewitt devoted its design Triennial to the multifaceted issue of

sustainability and a number of socially responsible design project were featured. The exhibition

Why Design Now? addressed designer's initiatives to create sustainable designs. As many

designers today understand the importance of Papenek's words, "the best and simplest thing

that architects, industrial designers, planners, etc. could do for humanity would be *to stop

working entirely*,"[71] this exhibition aimed to show *why* designers should *continue* to work under

the assumption that in the context of today's environmental and social conditions, design that is

cognizant of such factors is increasingly imperative. The exhibition was organized into eight

themes: energy, mobility, community, materials, prosperity, health, communication, and

simplicity. Similar to Papanek's approach in *Design for the Real World*, such groupings

demarcate and organize the problems that face a rapidly changing world.

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[69] Cynthia E. Smith, *Design for the Other 90%* (New York: Smithsonian Institution, 2007).

[70] "The primary question for the design professions thus becomes not what new products to make, but how to reinvent design culture so that worthwhile projects are more clearly identified and likely to be realized."[70] Margolin, 86.

[71] Papanek, xxv-xxvi.

In 2011, Smith and the Cooper-Hewitt organized the second exhibition in the DFO90

series entitled, *Design with the Other 90%: CITIES*. This show explored how people in developing

cities are working to address the consequences of rapid urbanization and rural displacement.

Smith traveled to regions in Africa, South America and Asia to uncover local solutions that

addressed the complex problems surrounding urban poverty (climate change, rapid growth,

sanitation access, etc). This exhibition opened at the United Nations in an effort to educate

politicians and policy makers in not only the international problems of urban poverty, but also

its varied and replicable solutions.[72] This offsite location further indicated the collaborative and

expanding nature of contemporary socially responsible design and the influence it can

potentially have on policy initiatives and economic development.[73]

Exhibitions organized by the Cooper-Hewitt and IWB show that design in the twenty-

first century has broadened to accommodate the world's changing landscape and needs. Even

the Museum of Modern Art, a historic art and design tastemaker, has organized exhibitions to

promote design innovations for international housing needs. *Small Scale, Big Change* opened in

2010 and featured eleven international case studies that necessitated a dialogue between

society and architecture.[74] Such exhibitions are similar to IWB's and the Cooper-Hewitt's,

reiterating design's growing inclusivity for design systems and culturally appropriate solutions.

The term *designer* is far more inclusive in the twenty-first century than when Papanek

began research in the late 1960s and early 1970s. Systems design and design projects are being

practiced with increasing frequency. The domestication of the Internet in the late 1990s and

[72] Smith, *Design with the Other 90%: CITIES*.

[73] Full disclosure: the author of this thesis worked as a curatorial intern under Cynthia Smith on the *Design with the Other 90%: CITIES* exhibition from September 2010 – November 2011.

[74] Andres Lepik, *Small Scale, Big Change: New Architectures of Social Engagement* (New York: Museum of Modern Art, 2010).

early 2000s has allowed site-specific projects to gain international recognition.[75] The problems

of rapid urbanization and population growth are more profound than ever, so the solutions

must be equally visible.

The growth of sustainable, economic development in the twentieth century

Soon after Papanek published *Design for the Real World*, *The Limits to Growth* was

released, a text that explored the realities and consequences of exponential growth, exposing

the finite "limits" of such escalation. The introduction simply stated, "If the present growth

trends in world population, industrialization, pollution, food production, and resource depletion

continue unchanged, the limits to growth on this planet will be reached sometime within the

next one hundred years."[76] As the design world acknowledged the negative impacts it could

have on society and the environment, economists and environmentalists were exploring the

negative impacts of industrialization and rapid economic and population growth. Similar to

Papanek, such texts used a tone desperate for immediate change.

In 1973, E.F. Schumacher published *Small is Beautiful: Economics as if people mattered*,

which emphasized the benefits of contained economic and industry development in the global

economy. Schumacher stated in the first pages of his text, "Small-scale operations, no matter

how numerous, are always less likely to be harmful to the natural environment than large-scale

ones, simply because their individual force is small in relation to the recuperative forces of

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[75] The same idea was also suggested by designer Bill Moggride, who credited digital technology and the Internet with socially responsible design's increased and recent popularity. See Rachel Signer, "Bill Moggridge On Socially-Responsible Design, Connectivity, And Globalization," Dowser.org, November 17, 2011 http://dowser.org/bill-moggridge-on-socially-responsible-design-connectivity-and-globalization/ (last accessed February 2, 2012).

[76] Donella H. Meadows, et al. *The Limits of Growth: A report of the Club of Rome's project on the predicament of mankind* (New York: Universe Books, 1972), 23.

nature. There is wisdom in smallness."[77] Schumacher began to rethink and reconsider how

global economic development functioned, and explored the idea that different societies have

varying needs, so a universal solution was not ideal. Perhaps one of the most noteworthy

chapters, "Buddhist Economics," cleverly conceptualized an economic system based solely on

Buddhist philosophies. This combination would result in an economic system that differs vastly

from its Western counterpart suggesting a flaw within the current Western system.[78] A Buddhist

economic system would not strive towards endless growth, Schumacher claimed, but work to

meet a sustainable level to maintain livelihood. He wrote, "Buddhist economics must be very

different from the economics of modern materialism, since the Buddhist sees the essence of

civilization not in the multiplication of wants but in the purification of human character."[79]

Schumacher proceeded to explain how a Buddhist economic system would function leading to

the realization that each culture requires different needs from an economic system.

Schumacher's claims further suggest the danger in assuming a universal solution to all

problems – economic or otherwise. Designs have been plagued by the concept of universal

solutions for decades. For example, IDEO's story of Shanti exposed problems that may arise

when cultures are not entirely understood – perceived solutions could create larger problems.

The same holds true for economics, according to Schumacher. This text exposed the intersection

of development, economics and the environment and suggests that such interdisciplinary

situations necessitate a multitude of players. This text marks an attempt to alter how global

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[77] E.F. Schumacher, *Small is Beautiful: Economics as if people mattered. 25 years later…with commentaries* introduction Paul Hawken (Washington: Hartley and Marks, 1999; originally published London: Blond and Briggs, 1973), 22. He writes later that, "A small minority of economists is at present beginning to question how much further 'growth' will be possible, since infinite growth in a finite environment is an obvious impossibility" (p. 33).

[78] E.F. Schumacher, "Buddhist Economics" in *Small is Beautiful,* 37-45.

[79] Ibid., 39.

economic development is practiced while highlighting the benefit of interdisciplinary research to improve the outlook of development.

Beyond texts and scholarship, a number of conferences were held to discuss the issues of international economic development. In 1987, the World Commission on Environment and Development convened at a conference entitled *Our Common Future* to create "a global agenda for change."[80] The aim of this conference was to create a world that simultaneously considers the environment and development.[81] This conference and supplementary publication, also known as the Brundtland Report, addressed the environmental dangers of a rapidly urbanizing and globalized world. It recognized the lack of many basic needs in the developing world, specifically in the areas of job creation, food, energy, housing, water, sanitation and health care.[82] The literature also focused on the needs and rights of women and the value of including marginalized groups in decision-making. The Brundtland Report promoted program creation to meet basic social needs and to bring each individual to the fore of local planning.[83] Although this conference focused more on development and environmental concerns, such conversations can help bring marginalized issues to a wider population. Similar to how Papanek exposed the need for design in the developing world, this conference called for an improvement and delineation of basic human needs. Since the conference wanted to instigate global change, it

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[80] World Commission on Environment and Development, *Our Common Future* (Oxford; New York: Oxford University Press, 1987), ix.

[81] Ibid., xi-xii.

[82] Ibid., 54-55.

[83] Ibid., 38. The conference text also includes a section on fertility and the promotion of women's rights: "Social and cultural factors dominate all others in affecting fertility. The most important of these is the roles women play in the family, the economy and the society at large. Fertility rates fall as women's employment opportunities outside the home and farm, their access to education, and their age at marriage all rise. Hence policies meant to lower fertility rates not only must include economic incentives and disincentives, but must aim to improve the position of women in society. Such policies should essentially promote women's rights" (p. 106).

encouraged input from a variety of fields recognizing that significant changes cannot occur

without collaborative efforts.[84]

A few years later, the Earth Summit was held in Rio de Janeiro, Brazil from June 3-14,

1992. The resulting *Agenda 21* – a plan for future sustainable development consisting of twenty-

seven principles – was adopted at this United Nationals conference.[85] This conference wanted

to generate the creation of sustainable development with ample consideration of human impact

on the environment through measures such as educational initiatives, responsibility ownership,

and collaborative cooperation.[86] Similar to the Brundtland Report, *Agenda 21* mentioned the

need to address women's emerging role in society. Of the twenty-seven principles, principle

twenty reads: "Women have a vital role in environmental management and development. Their

full participation is therefore essential to achieve sustainable development."[87] Another chapter

addressed the need to protect "vulnerable groups" such as "infants, youth, women, indigenous

people and the very poor," the text called for promoting women's health and education and

encouraged the promotion of prenatal care.[88] However, this perspective is problematic because

it primarily considers women as child bearers or mothers. All suggested female education

initiatives focused on family planning and continued education. Yet, the report does not

acknowledge the reasons many women cannot complete school. To discuss women within a

narrow focus and to link them indefinitely with pregnancy and children is problematic. Even if

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[84] Ibid., 311. (Speaker from the floor, government agency. WCED Public Hearing, Jakarta, 26 March 1985).

[85] *Agenda 21: Programme of Action for sustainable Development*, Rio Declaration on Environment and Development, Statement of Forest Principles, the final text of agreements negotiated by Governments at the United Nations Conference on Environment and Development (UNCED), 3-14 June 1992, Rio de Janeiro, Brazil, 3.

[86] For a complete list of the twenty-seven principles see *Agenda 21*, 9-11.

[87] Ibid., 11.

[88] Ibid., 46.

the initiatives work to improve these conditions, by viewing women as *only* this, it becomes

increasingly difficult for them to fully participate in a growing, modernizing society.

Later in the text however, *Agenda 21* devoted one chapter to "Global action for women

towards sustainable and equitable development," which considers the complex role of women

in society.[89] This chapter presented the government initiatives and policy programs that should

be implemented to ensure gender equality. Such initiatives included opportunities for women to

become involved as decision makers, increased focus on female education, promotion of health

care facilities for women and children so that women can work outside the home, and rural

banking systems to allow flexibility.[90]

Concluding remarks: The benefit of innovative investment

Since the field of socially responsible design began to officially emerge in the early 1970s,

it has gradually grown more inclusive, as this chapter has demonstrated. Beginning when

Papanek credited the design industry with playing a critical role in the deterioration of society

and the environment, the field has developed to include not only design practitioners, but also

policy makers, economists and design thinkers. This shift has occurred simultaneously with a

growing awareness of the impact of economic development. To consider how this relates to SHE

and other socially responsible design projects, it is important to consider the economic

circumstances that surround such projects.

Since the post-war period, many developing countries, specifically Africa have relied on

foreign aid. In 2010, Dambisa Moyo published the text *Dead Aid: Why Aid is Not Working and

How There is a Better Way for Africa*. Moyo presented "the story of the failure of post-war

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[89] Ibid., 220.

[90] Ibid.

development policy."[91] Her research focused on the amount of government aid delegated to

Africa and the irony that many countries within the continent are not self-sustaining. Moyo

explained how corruption could result from blind aid or the emergence of aid as a cultural

commodity. Instead of aid, she proposed the adoption of sustainable investment initiatives in

order to lead to the sustainable development of Africa.[92] As seen through the development of

socially responsible design, many African countries are in need of design solutions that do not

rely on aid, but rather ones that will lead to economic development and improved living

conditions. Through its initiative SHE28, SHE proposes such an approach and embodies many of

the characteristics of contemporary social design practice because its design solution works to

improve the lives of women in Rwanda holistically through access to education, small businesses

and basic health needs.

      The next chapter will consider the history outlined above through the lens of gender

and design history to continue to add feminist perspectives to the socially responsible design

field. The next chapter will examine how design practitioners and policy makers commonly

address women's needs. This analysis will suggest that the reason a number of women's basic

health needs are not being met is that women were not sufficiently considered by the field's

founding practitioners and historians.

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[91]Dambisa Moyo, *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa* (New York: Farrar, Straus and Giroux, 2010), xix.

[92] Ibid., 3-9.

Chapter Two: Feminist Perspectives of Socially Responsible Design[1]

Introduction

This chapter aims to examine socially responsible design through the lens of feminist design scholarship.[2] Gender and design history scholars, such as Cheryl Buckley, Pat Kirkham, the Matrix group, Penny Sparke and others, will help to formulate feminist perspectives within the field. As the previous chapter charted the main thinkers and events that have formed a history of socially responsible design, this chapter will analyze some of those texts in more detail to build these perspectives. It will also briefly introduce and examine contemporary projects to reflect on how women's needs are being addressed within socially responsible design practice.

With the development of socially responsible design, a holistic perspective of design has emerged – one that considers economics, development and the environment – as suggested in the previous chapter. This approach developed over time due to significant shifts in societal ideology. To contextualize, when Victor Papanek publically criticized design practitioners in *Design for the Real World*, other campaigns, such as the environmental and feminist movements, were gaining momentum. In 1962, Rachel Carson published her groundbreaking text, *Silent Spring*, thus exposing the long-term unforeseen consequences of harsh chemicals on human health, animal life, and the environment.[3] Carson's extensive research and subsequent

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[1] The wording of "feminist perspectives of socially responsible design" is inspired by Cheryl Buckley's call for "a feminist critique of design history" in Cheryl Buckley, "Made in Patriarchy," *Design Issues* 3, no. 2 (Autumn 1986): 9.

[2] The debate between feminism and design versus gender and design scholarship is outside the confines of this thesis. Since this thesis considers how socially responsible design addresses the needs of women exclusively, the term 'feminism' is deemed more appropriate for this analysis. For more information on this subject, see Joan Rothschild, ed., *Design Feminism: Re-Visioning Spaces, Places, and Everyday Things* (New Jersey: Rutgers University Press, 1999).

[3] Rachel Carson, *Silent Spring,* Fortieth Anniversary Edition, introduction Linda Lear, afterward Edward O. Wilson, (New York: Houghton Mifflin Company, 2002; original copyright, 1962); Nigel Whiteley also briefly mentions the role of *Silent Spring* stating, "With the circulation of books such as Silent Spring, the previously overlooked side-effects of industrialization and advanced technology started to become

text were an early spark to the environmental movement that progressed throughout the

decade.[4] One year later, Betty Friedan unearthed the plight of the American housewife. Six

years of research resulted in a 400-page text entitled *The Feminine Mystique* and is considered

by many to be the catalyst of second-wave feminism in the United States. Published in 1963, it

exposed another issue: "the problem that has no name." This *problem* for women manifested in

a lack of professional ambition outside the home, but also depression due to isolation and

loneliness. Friedan's research indicated that the *problem* existed (in part) because of societal

pressures, print media, and misogynist social conventions. This *problem* was permeating the

psyche and morale of American women and housewives.[5] These groundbreaking publications

predate Papanek's criticism of the industrial design industry and his efforts to inspire an

alternate design field. Although Papanek considered the environmental impact of design, he

rarely considered women in his text. In fact, feminism and socially responsible design have yet

to explicitly converge within Design Studies or Design History.[6]

The previous chapter charted a history of socially responsible design to demonstrate the

field's evolution from isolated design polemicists, to its entrance into design history scholarship,

to its presence in contemporary museum exhibitions. This progression is due, in part, to a shift

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matters of concern for an increasingly vocal lobby…" Nigel Whiteley, *Design for Society* (London: Reaktion Books, Ltd, 1993), 48.

[4] For more information, see a more complete analysis in chapter one of this thesis. For more information on the progression of the environmental movement see publications such as Nigel Whiteley, *Design for Society*; Andrew G. Kirk, *Counterculture Green: The Whole Earth Catalog and American Environmentalism* (Kansas: University Press of Kansas, 2007).

[5] Betty Friedan, *The Feminine Mystique* introduction Anna Quindlen (New York: W.W. Norton & Company, 1997; original publication 1963).

[6] While feminist design and socially responsible design often appear in similar breaths, they have not been explicitly discussed together. For example, Nigel Whiteley in *Design for Society* devotes a section to "Feminist Design" and to "Green Design" but he does not think of feminist design within social design practice. Additionally, Dean Nieusma's article, "Alternative Design Scholarship: Working Toward Appropriate Design," *Design Issues* 20, no. 3 (summer 2004): 13-24., discusses varying types of "alternative design." Feminist design and socially responsible design are two highlights of his article, but the discussions do not overlap.

from traditional design-school educated practitioners to the more inclusive role and holistic

perspective of the 'design thinker.'[7] International conferences also played a role in this

progression by producing documents such as *Agenda 21* and the Brundtland Report. These

efforts integrated international development with an environmental awareness to create a

sustainable plan for the future. Overtime, designers and design thinkers saw an opportunity for

collaboration within these fields.[8] While the needs of women and their role in society were

considered within such conferences, many socially responsible designers and projects still

address selective needs of women.

Context: Women and International Economic Development and Policy

Prior to analyzing the scholarship of socially responsible design through a feminist lens,

this section will briefly outline how the role of women has been considered within the context of

international development and policy making. Since the 1970s, a number of scholars,

economists and policy makers, have stressed the importance of women in development and

economics. By looking at the perspective of one economist and by charting the evolution of

public policy as it addresses women's needs, this section will contextualize how such needs are

mediated in order to understand how policy can influence socially responsible design.

Amartya Sen, an economist from India, explores the role of women in development. His

research examines the complexity of gender inequality and discovers that it "is not one

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[7] Tim Brown and Jocelyn Wyatt, "Design Thinking for Social Innovation," *Stanford Social Innovation Review* (Winter 2010): 30-35.

[8] Victor Margolin, "Design for a Sustainable World," *Design Issues* 14, no. 2 (Summer, 1998): 90-91. In this article, Margolin called for designers to rethink their role in society in order to create "projects for the welfare of humankind." He also became critical of designers noting that their role in the creation of a sustainable world has yet to be realized. The last sentences of his article called for designer participation in this field. He wrote, "If the will exists among designers, it will surely be possible to reinvent industrial design. If it doesn't, designers will simply become part of the problems whose solutions other professions will need to invent." Margolin, 92.

homogeneous phenomenon, but a collection of disparate and inter-linked problems."[9] These

varying inequalities are present in every society, but the consequences can be more pronounced

in developing and emerging economies and can be particularly dire for women. For example,

lack of proper prenatal nutrition leads to low infant birth weights, which can cause lifelong

health complications regardless of sex.[10] In some countries, such as India, advancements in

prenatal ultrasound technology have lead to a disproportionate number of aborted female

fetuses.[11] In other cases, the inequality occurs more gradually over a lifetime: young girls do not

receive the same health care and nutrition as young boys leading to malnutrition with lifelong

consequences.[12]

By exposing societal and institutionalized inequality, Sen aims to change this reality by

demonstrating the value women can have in development. He includes women within the

international development conversation, stressing that "the changing focus of women's

movements is, thus, a crucial *addition* to previous concerns; it is not a rejection of those

concerns."[13] Sen encourages female literacy and education to increase women's income and

status in society, suggesting such tactics will reduce "mortality and fertility rates."[14] Due to the

overwhelming evidence that women have an essential role in development, Sen argues that

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[9] Amartya Sen, "The Many Faces of Gender Inequality: When misogyny becomes a health problem," *The New Republic* (September 17, 2001): 35.

[10] Ibid., 38. Sen writes "In sum: what begins as a neglect of the interests of women ends up causing adversities in the health and the survival of all, even at an advanced age. These biological connections illustrate a more general point: gender inequality can hurt the interests of men as well as women." He goes on to explain how low infant birth weight can cause cardiovascular disease in both men and women.

[11] Ibid., 39.

[12] Ibid., 37.; See also, Department of Gender and Women's Health, World Health Organization, "En-gendering the *Millennium Development Goals* (MDGs) on Health," (Switzerland: WHO Publications, 2003), 3.

[13] Amartya Sen, *Development as Freedom* (New York: Anchor Books, A Division of Random House, Inc., 1999), 190.

[14] Ibid., 201.

"While there is every reason not to slacken the concern about women's well-being and ill-being, and to continue to pay attention to the sufferings and deprivations of women, there is also an urgent and basic necessity, particularly at this time, to take an agent-oriented approach to the women's agenda."[15] He calls for action to empower women through education to increase their social standing and inevitably their familial status, which will trickle to impact communities and eventually the entire nation.

This brief overview of Sen's key findings in international gender inequality exposes how it is manifest on a global scale in varying economic and social capacities.[16] Since he has lectured and often been critical of policy makers and organizations such as the United Nations,[17] Sen has an overwhelming influence and perspective. His research has brought the realities of gender inequality in both the developed and the developing world to the fore, particularly for his emphasis on addition and inclusion rather than replacement or exclusion. Thus his work is important to include when examining how socially responsible design addresses women's needs.

Sen is not the first economist to consider women's rights within international public policy. In 1975, the United Nations organized a conference aimed at the improvement of women's agency. This conference in Mexico City, commenced the UN Decade for Women (1976-1985), which sought to improve women's status and promote gender equality by 1985.[18] Conferences were organized throughout the decade to assess the success of the policy

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[15] Ibid., 191.

[16] For a more in-depth analysis and data, see Sen's articles and texts cited above. See also, Amartya Sen, "Women's Survival as a Development Problem," *Bulletin of the American Academy of Arts and Sciences* (November 1989): 14-29.

[17] Sen, *Development as Freedom*, xiii.

[18] Arvonne S. Fraser, *The U.N. Decade for Women: Documents and Dialogue* (London/Boulder: Westview Press, 1987), 1. See also Jacqui True and Michael Mintrom, "Transnational Networks and Policy Diffusion: The Case of Gender Mainstreaming," *International Studies Quarterly* 45, no. 1 (March, 2001): 30.

initiatives.[19] The decade's influence is far-reaching. Women's international conferences were

organized even after the decade ceased its attempts to encourage the proliferation of gender-

conscious policy making. This resulted in the adoption of policy to empower women, a process

so widely absorbed that it is often referred to as "gender mainstreaming."[20] For example,

"Between 1975 and 1997, new state bureaucracies coined 'national machineries for the

advancement of women' sprang up in over 100 countries across all global regions."[21] These

policies aimed to highlight and eventually combat gender inequalities. This phenomenon is

important for the purposes of this thesis, because it demonstrates how a feminist agenda began

to penetrate international policy and development standards. Such evidence suggests that

efforts were taken to consider women's health, status and employment needs in order to offer

equal agency to women internationally.[22] However, evident by the perpetual gender inequality

that exists, such initiatives have fallen short of their stated goals.

Though international gender equality has not been achieved to date, the United Nations

has continued to make succinct efforts to improve women's agency as well as the environment

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[19] Fraser discusses the various conferences that occurred during the decade: Fraser, 9-16, 69-92. Conferences were also held after this decade to continue the effort to improve the status of women worldwide. "Although women have been organizing at the global level for more that 150 years, the UN International Women's Decade marked a new era in women's transnational activism. Thousands of women participated in the four UN women's conferences in Mexico City (1975), Copenhagen (1980), Nairobi (1985) and Beijing (1995), the last of these being the largest UN work conference ever held." See also True and Mintrom, 38.

[20] True and Mintrom, 27-57. The concept of 'gender mainstreaming' emerged in 1990s. True and MInstrom offer a number of definitions for this phenomenon, but this lengthy description may prove a useful definition: "Gender mainstreaming therefore, is conceived not as a goal in itself, nor merely as a *liberal* policy to include women. Rather it is a more *radical* strategy for achieving gender equality that involves traditional state efforts to address gender imbalances by developing specific policies for women (e.g. reproductive health and employment equity policies). More importantly, though, mainstreaming is the ongoing process by which public policies that are known to have a large impact on society, from macroeconomic to housing policy, are devised by taking into account the specific interests and values of both men and women. To put mainstreaming policy into practice means to 'reorganize, improve, develop, and evaluate policy processes in order to incorporate a gender equality perspective'….The purpose of mainstreaming is to alter the existing social and political order that leads to gendered outcomes" (p. 33).

[21] Ibid., 30.

[22] Ibid., 31.

and economic development. At the turn of the twenty-first century, the UN proposed the *United Nations Millennium Declaration*,[23] more commonly known as the UN Millennium Development Goals (MDGs).[24] This policy initiative consisted of eight goals in total, the third addresses "gender equality" specifically, but each embodied elements of women's role in global development.[25] Such policy efforts aimed to improve health, decrease poverty, and address women's needs help to shape international discourse and it can be argued that the MDGs helped instigate the influx of design practitioners into the socially responsible design field. The fact that the MDGs address women specifically in more than one goal is notable (Goal 3: Gender Equality, Goal 5: Maternal Health). Yet, it is important to consider *what* needs are addressed to analyze *how* women are still viewed within the confines of patriarchal structures. While this paper is not exclusively concerned with women in international development, it is still necessary to contextualize the framework from which socially responsible design has developed and how women's needs fare on the global agenda. Since socially responsible design aims to use designed systems to provide basic needs to its users, distinguishing and recognizing those basic needs is central to the field.

Women's needs within socially responsible design scholarship

This section will analyze how socially responsible design history scholars and design thinkers address women's needs. Using the support and approach of prominent gender and

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[23] "United Nations Millennium Declaration: Resolution adopted by the General Assembly," United Nations, General Assembly Fifty-fifth session, Agenda item 60 (b), (September 18, 2000), retrieved from "Background," United Nations Millennium Development Goals, http://www.un.org/millenniumgoals/bkgd.shtml (last accessed January 20, 2012).

[24] "Background," United Nations Millennium Development Goals, http://www.un.org/millenniumgoals/bkgd.shtml (last accessed January 20, 2012).

[25] For a complete gendered analysis of the MDGs, see WHO, "En-gendering the *Millennium Development Goals* (MDGs) on Health."

design scholars, this section will problematize the field's perception of women and thus offer

critical feminist perspectives in an effort to broaden its history.

Early in his groundbreaking text, *Design for the Real World,* Papanek stated the

predetermined basic needs of "mankind" as "food, shelter, and clothing….tools and

machines…But man has more basic needs than food, shelter and clothing. We have taken clean

air and pure water for granted."[26] While this list acknowledges dire needs, it is important to

reflect on what needs are missing from this list. For example, Papanek did not list basic health

needs (for *any* individuals regardless of sex). Such an omission suggests that health needs were

being met or absorbed by other factors, or that solving health problems was not the job of a

designer. The omission of health from Papanek's list is particularly problematic for women

because a number of their basic needs are health specific. Throughout a lifetime, any person can

be threatened by disease, old age, or physical disability, but not all will experience menstruation

or pregnancy. Failing to call attention to any health needs (basic or specific) results in such

needs being unnoticed or de-prioritized.

As his argument developed Papanek became explicit about the specific needs of

developing societies and extended his list to help designers focus their efforts. The most

pertinent needs were: "power sources, light sources, cooling and refrigeration unites, vermin-

proff grain storage facilities, simple brick-making and pipe-making systems…communication

systems, simple educational devices, water filtration, and immunization and inoculation

equipment."[27] Later, he considered other needs of developing nations, including specific items

such as mobility devices, improved all-terrain vehicles and roads, and design for those with

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[26] Victor Papanek, *Design for the Real World: Human Ecology and Social Change*, introduction R. Buckminster Fuller (New York: Pantheon Books, 1971), 46.

[27] Ibid., 124-125.

disabilities.[28] It is important to acknowledge that Papanek was rejecting mainstream design

practice and calling for a reconfiguration of contemporary practice; he was entering uncharted

territory. It was also his first attempt to guide designers on how to fulfill needs outside of

consumer-driven practice. However, this list was too specific at times while simultaneously too

superficial. As a founding text within the field, his research and critical perspective would

influence design interventions for years (even decades) following publication. Papanek's failure

to consider basic health needs was an underdeveloped element of his argument. While

electricity, mobility, education and communication are necessary to modern life, if health needs

are not considered or addressed, no other systems are possible or even necessary. Papanek did

mention some health issues that needed attention such as medical equipment or improved

hospital wards in industrialized nations,[29] but failed to consider health within an international

context in less-developed nations.

Despite this initial oversight, as socially responsible design has developed, health has

become a major focus within the field. Perhaps this shift has occurred due to the rise of global

health projects influenced by rapid population growth, urbanization, and deteriorating health

conditions in the world's cities. Advanced communication technologies such as the Internet may

also be a contributing factor as they expose such conditions to an international audience. But

this shift may also be attributed to the HIV/AIDS epidemic that emerged in the 1980s. Since

prevention of this disease is complex and calls on education, sanitation, and improved health

conditions, it may have encouraged an innovative approach, one that requires collaboration

from varying fields. The research of economists like Amartya Sen, who work to uncover the

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[28] Ibid., 171-181.

[29] Ibid., 53-55, 230.

problems associated with insufficient health care, specifically for women, may be another

reason for this shift.

The rise of health awareness is particularly important for this discussion because many

of women's basic needs are health related as previously stated. It is interesting, and problematic

however, to mainly consider women's health exclusively as it relates to pregnancy and

motherhood, which is its most common iteration.[30] Considering the context of Papanek's text, it

is not surprising that women's needs were of minimal concern. Second wave feminism was still

gaining momentum; women and feminists were (and still are) striving to overcome

institutionalized gender inequality across industrialized and developed countries. Yet, even as

the socially responsible design field evolved, if women's needs were addressed at all they were

considered within a specific and confined framework such as pregnancy and motherhood;

health issues like menstruation are never mentioned. However, the issue is important because

menstruation education and management is as basic as providing food or clean water.

Regardless of the initiatives taken to combat poverty or inequality, if a need of roughly half of a

population is unmet, sustained progress will prove difficult. Public health and design

practitioners who are concerned with more life-threatening issues such as prenatal health,

tuberculosis, or HIV/AIDS may also see menstruation as a secondary focus.

To read this omission from feminist design perspectives, Papanek's lack of attention to

women highlights the way Papanek conceived of design for the world. To review his list of

needs, Papanek was very specific. For example, instead of listing "electricity" as a need, he

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[30] For example, in the 2004 exhibition *Massive Change*, women were rarely mentioned within the context
of design that could change the world, but rather were mostly discussed under the context of HIV/AIDS
and pregnancy. Bruce Mau, Jennifer Leonard, and the Institute without Boundaries, *Massive Change*
(Phaidon, 2004), 227-229. See also the MDGs, and note that one goal is devoted entirely to women's
maternal health, which is noteworthy, but also presents women's health as it relates to childbearing of
primary importance.

specifically listed "power sources, light sources."[31] Rather than listing "heath", he specified

"immunization and inoculation equipment."[32] These specificities automatically limit the types of

designs that are *known* to be needed. Though Papanek did encourage designers to immerse

themselves within cultures in order to design well, such lists can be limiting and

counterproductive, for the development of a new field requires general and broad aims rather

than specifics.

Papanek excluded women from his list of needs, but also from his list of designers. The

first chapter of Papanek's text entitled "What is Design?" began with the declaration that "all

men are designers."[33] This statement is important for two reasons. First, it shows that Papanek

considered all men to be designers – that much is obvious. It is inclusive for it does not state, 'all

those who have attended design school and are trained practitioners are designers,' but rather

that all men regardless of education were, in fact, designers. Second, while on one hand this

statement is seemingly inclusive for it gives design ownership to all men, its language is

exclusive because it does not acknowledge participation from women. While a detail in

semantics, this sentence holds powerful meaning and is representative of the patriarchal

structures from which socially responsible design emerged.[34]

Socially responsible design has progressed significantly since Papanek's text, and women

and other groups have begun to enter the discourse, but still as marginalized or "other." For

example, in Nigel Whiteley's *Design for Society*, he devoted an entire section to "feminist

perspectives." He charted the status of the field and provided a brief overview of prominent

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[31] Papanek, 124.

[32] Ibid.

[33] Ibid., 3.

[34] John A. Walker notes the same problem with Papanek's language in his text John A. Walker, contribution by Judy Attfield, *Design history and the history of design* (London: Pluto Press, 1989), 31-32.

scholarship that considers women in design. This section however, was limited to the developed

world and did not consider the needs of women outside of that sphere.[35] Additionally, Dean

Nieusma's article, "Alternative Design Scholarship: Working Toward Appropriate Design,"

considered an array of marginalized groups, such as women and the disabled. He discussed

feminist design and socially responsible design, but the two analyses never converged.[36]

Women's needs within socially responsible design practice

To move beyond scholarship and design thinkers, this section will analyze the types of

projects produced by socially responsible design practitioners. Rather than compile a list of the

numerous projects created that address women's needs, this section will introduce examples of

the types of projects that are generally exhibited and critically reviewed within socially

responsible design discourse. This list will be expanded and further analyzed in the following

chapter.

Bangladesh Rehabilitation Assistance Committee (BRAC), works to combat

discrimination, poverty and injustice through holistic initiatives that include microfinance,

health, education, etc.[37] Though BRAC does not work exclusively with women, it initiates

programs to improve women's livelihood through access to education and health care, among

other things. The Nike Foundation's, *The Girl Effect,* emphasizes the economic and social

benefits that result from investing in girls,[38] whilst the Hippo Roller works to aid in the

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[35] Whiteley, 134-157.

[36] Dean Nieusma, "Alternative Design Scholarship: Working Toward Appropriate Design," *Design Issues* 20, no. 3 (summer 2004): 13-24.

[37] For a complete list of BRAC's initiatives, visit brac.net.

[38] The Girl Effect was featured in the Cooper-Hewitt, National Design Museum's Triennial exhibition, *Why Design Now?* which opened in the spring of 2010. Ellen Lupton, et al., *Why Design Now?* (New York: Smithsonian Institution, 2010), 150-1. See also, "The Girl Effect," http://www.girleffect.org/question, (last accessed November 8, 2011).

transportation of water, traditionally a women's duty in many developing countries. The

BeadforLife project trains women to make beads from recycled paper – a readily available

resource. The beads are then sold to retail facilities around the world.[39] Another project

designed by Practical Action instructs women on how to build clay stoves to provide improved

and safer indoor cooking stoves.[40] Since cooking practices often are detrimental to health,[41]

these advanced stoves will improve cooking conditions for the user – most often women.

Though not exhaustive, this list is a profound example of the types of projects initiated

internationally to address women's needs.[42] Based on this list, one can conclude that socially

responsible design considers women as active users of products. When women are viewed as

producers, the resulting products are beneficial to others. For example, many of these projects

work to improve women's daily lives as it relates to their water collection, cooking, maternal

and household duties.[43] Many are made possible by foreign aid or donations. Of course, it must

be noted that these projects are greatly beneficial to women and will undoubtedly improve their

daily life. Yet, it is important to think critically about the implications of these assumptions. Such

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[39] "BeadforLife: Eradicating Poverty on Bead at a Time," http://www.beadforlife.org/about-origin.html (last accessed November 9, 2011).

[40] These improved clay stoves were featured in the Cooper-Hewitt's National Design Triennial. Lupton, et al., 47.

[41] See Andrew Revkin, "A Path to Cleaner Cooking in Africa," *The New York Times*, September 23, 2010, http://dotearth.blogs.nytimes.com/2010/09/23/a-path-to-cleaner-cooking-in-africa/ (last accessed January 24, 2012). See also, Madeleine Bunting, "How Hillary Clinton's clean stoves will help African women," *The Guardian* September 21, 2010, http://www.guardian.co.uk/commentisfree/cifamerica/2010/sep/21/hillary-clinton-clean-stove-initiative-africa (last accessed January 24, 2012).

[42] A few of the projects discussed in this section were displayed at the Cooper-Hewitt, National Design Museum's most recent Triennial *Why Design Now?* which presented notable designs from recent years. Since this exhibition was not specifically a socially responsible project, it can be assumed that such projects highlighted here are notable and exemplary for the type of work that is being undertaken internationally.

[43] A more extreme example occurs when women are discussed within the context of HIV/AIDS, some of the fear surrounding the feminization of the virus is that mothers will spread it to their children during pregnancy or breastfeeding. Though an important consideration and consequence, it still fails to see how women, exclusive of any other party, are impacted. *Massive Change*, 227-229.

projects should continue to be executed, however, certain needs should be prioritized and added to this list and thus brought into design and exhibition discourse.

Drawing from Cheryl Buckley's thesis in her 1986 article, "Made in Patriarchy," it is important to acknowledge that "women's needs" as defined (if at all) by socially responsible design scholars and practitioners, were created under patriarchal systems.[44] Considering women exclusively within the confines of motherhood or pregnancy, cooks, or craftspeople, for example, suggests that *the* most important role for women is in relation to her family or the foreign market.[45] To follow Buckley's lead and to develop a feminist critique of socially responsible design[46] requires recognition that the needs of women within the field reflect a perception of women as a user and producer, but rarely as both or for the sole benefit of women. Women's basic needs are overlooked for the benefit of seemingly 'larger, more important' issues pertaining to the family, community or foreign market. Though women make up roughly half of the world's population,[47] few of the projects aimed at women's agency and needs suggest sustained employment, independence or business ownership. Projects that improve women's daily activities are invaluable, for the reality is that women do cook indoors, gather water, bear and raise children. But they can also be prohibitive if women are not empowered to see beyond their daily tasks but rather only aided in easing those tasks.[48] Such a

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[44] Cheryl Buckley, "Made in Patriarchy," *Design Issues* 3, no. 2 (Autumn 1986): 3-14. Buckley writes, "Design historians who examine women's role in design must acknowledge that women in the past and women today are placed within the context of patriarchy, and that ideas about women's design abilities and design needs originate in patriarchy." Buckley, 4.

[45] This stems from the Western perspective of women in the developing world since many policies are written from a Western perspective.

[46] The wording of "a feminist critique of socially responsible design" is borrowed from Buckley's call for "a feminist critique of design history." Buckley, 9.

[47] For a breakdown of the ratio of men to women, see Sen, "The Many Faces of Gender Inequality: When misogyny becomes a health problem," *The New Republic* (September 17, 2001): 35-40.

[48] This draws a parallel to the claims professed by Phil Goodall, See Phil Goodall, "Gender and Design," *Block* 9 (1983): 50-61., which drew out the implications of 1950s designs that "improved" women's daily

repositioning or addition of priorities could be greatly beneficial in empowering women to see

beyond these daily roles.

This perplexing contradiction relates to the research of the Matrix group in England,

which sought to examine women's role in architecture as practitioners, but mostly as daily users

within the built environment. When discussing the work of feminists in the 1920s, Matrix

worked to delineate the simultaneous freedom and confinement of their efforts. They argued,

> The 'new' feminists had a more 'woman-centered' view, campaigning around women's
> issues especially areas concerning the health and welfare of women and children. There
> were contradictions in this approach since it accepted a broadly patriarchal view of
> women as wives and mothers, but it had the support of working-class women.[49]

This contradiction exists for women within the confines of socially responsible design. Though

women can create and receive valuable products that will improve their daily lives, the areas of

their lives that are being improved originate from patriarchal positions. Thus, women remain

restricted to their traditional roles. How can the field reconsider how women are viewed and

thus design more empowering and appropriate products or systems? [50]

A repositioning or an addition of priorities could lead to a revelation in women's needs.

With this in mind, however, it is important to reflect on the generalized perception of "women's

needs." Many areas of socially responsible design work to improve life among poor individuals

and/or developing nations and its people (though the field is not limited to this), thus an

element of marginalization exists. Peoples of developing nations are marginalized by developed

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life, when it actually just created more work. Though the economic and societal situations are not the same, the underlying critique of the argument has been made elsewhere.

[49] Matrix, *Making Space: Women and the Man-Made Environment* (London and Sydney: Pluto Press, 1984), 27.

[50] The Matrix group posed a similar question upon reflection of their research aims. Perhaps the questions need to be repositioned or the potential solutions should be redefined. "However, this research is based on particular questions, and the choice of questions determines the answer – and produces a window by the kitchen sink. The researchers asked: 'How can life with your hands in the sink be a little more pleasant?' not 'Why do women spend so much time at the kitchen sink?'" Matrix, 82.

society. As this thesis aims to uncover how women (a marginalized group) fare in socially

responsible design (a field that works to meet the needs of marginalized people) requires to a

complex analysis.[51] Feminist scholar, Chandra Talpade Mohanty, author of *Feminism without*

Borders discussed the complexities discussing and generalizing women (or any group) from a

foreign or outside perspective. "What is problematic about this kind of use of 'women' as a

group, as a stable category of analysis, is that it assumes an ahistorical, universal unity between

women based on a generalized notion of their subordination."[52] Thus, it is impossible to

effectively determine *all* of women's needs, though there are inherent aspects to being female

that necessitate specific care.

Sustainable Health Enterprises (SHE) is important for this exploration because

intrinsically, its SHE28 initiative works to address a woman's need: the need to maintain

menstrual flow. Menstruation is a commonality among all women regardless of nationality,

race, ethnicity, region, or class. As societies modernize and the separation between work and

home becomes more pronounced, the need for products that increase women's mobility are

imperative. For example, women in industrialized societies of the early twentieth century were

able to modernize with the increased availability of disposable sanitary pads. Penny Sparke cites

this occurrence in her text, *As Long as it's Pink* stating,

> Women's experience of modernity was indubitably different from that of men. The
> literary historian, Alison Light, has suggested that it was represented by such seemingly
> minor and 'invisible' innovations as that of the disposable sanitary napkin rather than by

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[51] It is also important to emphasis that although I am a woman as an American, I am writing from a Western perspective. Thus, I turned to the scholarship of "non-Western" feminist scholarship to consider how a Western feminist projects certain perspectives upon "Third World" women. Chandra Talpade Mohanty's text, *Feminism without Borders* was extremely useful for exploring the complexities of this issue.Chandra Talpade Mohanty, *Feminism without Borders: Decolonizing Theory, Practicing Solidarity* (Durham; London: Duke University Press, 2003).

[52] Mohanty, 31.

the much more visible public advances in the field of industrialisation, communications and transportation.[53]

Although modernized life will vary depending on region and culture, women's need for a healthy option to maintain menstrual flow will be constant. SHE is also important for this conversation because the organization addresses women simultaneously as the producer, user, consumer, and owner of a product that will be inherently beneficial. This multifaceted approach gives agency to women and a role in economic development.

Concluding remarks: SHE – women as producers/users/beneficiaries

The above section established a framework for a gendered analysis of socially responsible design. This conclusion will further discuss the position of women as user, producer, and 'consumer' and how this impacts women's agency. Though when the foundation for socially responsible design was being formed, women were insufficiently considered, over time their needs have entered the discussion. Socially responsible design projects that address women's needs often do so within the confines of patriarchal systems, which view women in relation to the home or children. Though these projects and services can be beneficial to women, it does not erase the fact that many women are still subordinate to larger family or community needs.

Elizabeth Scharpf, the founder of SHE, is not a trained designer; her background is in economics and international development. However, her organization has been recognized within the design industry for its innovative *system* design. The organization is interesting for this thesis for how it views women as producers, users, beneficiaries, consumers and owners of a product. Through microloans, SHE provides women with the opportunity to establish small businesses that distribute and will later produce sanitary pads. Not only will women have access

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[53] Penny Sparke, *As Long as it's Pink: The Sexual Politics of Taste* (California: Harper Collins Publisher, 1995), 4.

to sanitary pads, but they will also be business owners and presumably establish a sustainable

livelihood.

Scharpf was unaware that women did not have access to affordable sanitary pads until

she witnessed it firsthand in Africa. Although the need for sanitary pads is acknowledged in

specific fields, such as public health,[54] economists and designers must also prioritize and work to

address this need directly. The continued exclusion of this problem from socially responsible

design scholarship and discourse will only perpetuate women's subordinate status in such

societies. As (developing) countries continue to modernize and urbanize, lack of affordable

access to sanitary pads will further limit women's full participation in the economy.

Since menstruation is a common occurrence for all women, the need to address this

issue immediately should be of upmost priority. For if roughly half of a country's population

cannot contribute to society for two months a year, then the society will struggle to progress

socially or economically. Women will always be inhibited by their inability to produce or

contribute during this time and young girls will continue to be less educated than boys. Gender

equality relies on equal opportunity from birth. Until women can be uninhibited during their

menstrual cycle, this equality will be unattainable. And the solution is in an approach like SHE –

where women have agency over their livelihoods through equal access to education, health

care, and business opportunities. This problem can be solved with an innovative and effective

design system. Although menstruation is taboo is nearly all societies, it is central to

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[54] See for example, Sowmyaa Bharadwaj and Archana Patkar, "Menstrual Hygiene and Management in Developing Countries: Taking Stock," Junction Social: Social Development Consultants (November 2004).; "Menstrual hygiene in South Asia: A neglected issue for WASH (water, sanitation and hygiene) programmes," Report, WaterAid.; Dr. Varina Tjon A Ten, "Menstrual Hygiene: A Neglected Condition for the Achievement of Several Millennium Development Goals," EEPA: Europe External Policy Advisors, October 10, 2007. These sources call for a need to address the issue, there are no international solutions to date.

womanhood. If socially responsible design aims to bring design to those in need, it must

investigate all needs regardless of societal norms, taboos, or preconceived notions of what

constitutes need. The next chapter will discuss the evolution of SHE and initiative SHE28 as well

as additional projects that work to meet a similar need. It will further examine the socially

responsible design projects introduced in this chapter. This series of case studies will deepen

feminist perspectives of socially responsible design.

Chapter Three: Case Studies: Sustainable Health Enterprises & other projects

Introduction

This chapter examines the organization Sustainable Health Enterprises (SHE), the ideas

of its founder, Elizabeth Scharpf, and provides examples of design solutions initiated by SHE.

This chapter will discuss the development of SHE as an organization – its beginning, goals, and

innovation through systems design. This chapter also introduces socially responsible design

projects that address women's need for sanitary pads, and revisits the projects introduced in the

previous chapter to further detail how other women's needs are served. The examples provided

in this chapter will highlight the ways that contemporary socially responsible design projects

address women's needs.

Sustainable Health Enterprises: a founding story

Elizabeth Scharpf was a graduate student at Harvard University (class of 2007) when she

interned for the World Bank in Mozambique. This experience exposed her to some of the

challenges that face women in Africa. More specifically, Scharpf learned that many women in

Mozambique did not have access to affordable sanitary pads. Further research proved that this

problem was endemic – it was not unique to Mozambique or even Africa, but was a global

problem. To offset this lack of sanitary pads, women turn to alternative methods such as mud,

bark or rags to absorb menstrual flow. Rags are the most prevalent and traditional method, but

due to the contamination of water sources caused by various environmental factors (polluted or

diminished supply, for example), women often do not have adequate access to sanitary water to

properly clean their rags. When water is available, hanging such rags to dry in the sun is

culturally taboo, thus women store damp rags indoors leading to further bacterial build-up. The

rag material is naturally coarse and causes chaffing; open wounds can develop as women

continue their active, daily routine. This coupled with improperly cleaned rags, increases

exposure to infection.[1] As women lead more mobile lives – working, attending school, gathering

materials for the home, etc. – such limited options for absorbing menstrual flow do not afford

them the opportunity to continue such activities without interruption. This lack of access causes

adult women to miss up to fifty days of work per year – adding up to nearly two months without

pay. Young girls face the same problem. If they do not end their education at puberty, they can

miss up to five years of school in a lifetime.[2] Rather than approach large sanitary-pad

manufacturers to request aid or donations, Scharpf approached the issue as an entrepreneur

and founded SHE in 2007. SHE was established to utilize market-based approaches to combat

social issues, specifically relating to health.[3] Its current mission is "to invest in people and ideas

that are typically overlooked as vehicles of social change."[4]

In 2008, SHE launched its first initiative, SHE28, in Rwanda to address the specific need

for sanitary pads. Though Scharpf understood that inadequate access to sanitary pads was a

huge economic and humanitarian issue, women need more than *just* pads. This need could

provide women with the opportunity to gain ownership and agency through business, education

and design. SHE provides women with small-scale loans to develop businesses that distribute

and will later produce sanitary pads made from local materials. SHE also partners with local

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[1] Elizabeth Scharpf, interview by Jessica Harris, *From Scratch*, National Public Radio, June 30, 2010.

[2] Elizabeth Scharpf presented this information at the *Why Design Now?* conference, October 1, 2010 in The Allen Room, Frederick P. Rose Hall, Jazz at Lincoln Center, New York, NY. It can also be found on the Sustainable Health Enterprises website and blog (sheinnovates.org; http://sheinnovates.blogspot.com/). Nicholas Kristof, an op-ed columnist for the *New York Times* wrote a piece in October 2010 that showcased problems that address women's issues specifically. For more information see Nicholas Kristof, "D.I.Y. Foreign Aid Revolution," *The New York Times*, October 10, 2010, http://www.nytimes.com/2010/10/24/magazine/24volunteerism-t.html?_r=2&pagewanted=all.

[3] Scharpf, *From Scratch*.; See also "Frequently asked questions about Sustainable Health Enterprises (SHE)," Sustainable Health Enterprises website, sheinnovates.com.

[4] Elizabeth Scharpf, interview with the author, Sustainable Health Enterprises offices, New York, NY, April 20, 2012. See Appendix II for the full, transcribed interview. SHE's mission statement recently changed. Previously it's mission was "To improve the quality of life for people in developing countries." (Sustainable Health Enterprises website, "Mission statement", sheinnovates.org).

women's groups to increase education initiatives in business development, as well as health and

hygiene education.

This solution is designed to establish the opportunity for a sustainable livelihood. SHE's

intricate approach to holistic systems design[5] provides a valuable case study for exploring the

field of socially responsible design and specifically, how this initiative addresses women's needs.

Sustainable Health Enterprises: a system design

After Scharpf's initial exposure to women's inadequate access to affordable sanitary

pads in Mozambique, she began exploring the issue of menstruation in other countries to

understand the prevalence of the problem. Her research yielded similar results; many women

did not have access to sanitary pads, and their school and employment opportunities suffered as

a direct result. Since further research proved that it was a widespread problem, Scharpf wanted

to design a replicable model for sustainable development. She selected Rwanda for SHE28's

pilot project for its favorable business development laws, population, established community of

women's groups, and direct need for sanitary pad access.[6] Additionally, 56% of Rwanda's

parliamentary government is comprised of women.[7] Since women hold a major stake in the

country's decision making, this atmosphere proved ideal for the SHE28 initiative.

In the early stages of SHE28, Scharpf and her Rwandan colleagues began to research the

sanitary pads sold in local retail facilities. They discovered that a number of factors increased the

cost of pads. The pads were developed in one area, used resources from another, were shipped

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[5] Elizabeth Scharpf, interview with the author, Sustainable Health Enterprises offices, New York, NY, June 1, 2011. See Appendix I for the full, transcribed interview. Scharpf stressed the importance of systems design during this interview.

[6] "Our Initiatives," Sustainable Health Enterprises website, sheinnovates.org (last accessed November 11, 2011).

[7] "Women to Rule Rwanda Parliament," *BBC News*, September 17, 2008, http://news.bbc.co.uk/2/hi/7620816.stm (last accessed February 3, 2012).

to Kigali (the capital of Rwanda), and then distributed to various stores throughout the country before reaching the end user. Each player profited from their service, thereby increasing the price of the pads and making the product too costly for many women. To tackle this problem, SHE28's preliminary initiative worked to train a network of community health workers in health and hygiene education and business development, while also connecting them with the available sanitary pads in Rwanda. SHE provided the community health workers with the initial investment to purchase pads directly from the distributor, thus reducing the cost for the end user. The health workers could then sell the pads for 15% less than the previous retail price.[8] This initiative worked to improve local distribution while providing much needed education.

Simultaneously, SHE began conducting research for the creation and redesign of sanitary pads. Research revealed that existing pads were expensive because of the various distribution efforts, but also because the absorbent material was manufactured in Europe and amounted to half of the production cost. Besides price, most pads developed internationally consist of super absorbent polymers; a material that takes roughly ten thousand years to biodegrade. Based on this preliminary research, SHE understood that the newly designed pads had to be manufactured locally and developed using local raw materials in order to be sustainably effective.[9] The SHE team scoured Rwanda for a renewable and preferably agro-waste material that was both abundant and absorbent. They approached universities to investigate if such research had been undertaken. This outreach revealed a unique challenge to SHE's initiative. In the early 1990s, a horrific genocide devastated Rwanda when 800,000 people were killed in the span of three months.[10] In addition to civilians, the rebel groups targeted

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[8] Scharpf, *From Scratch*.

[9] Scharpf interview with the author, June 1, 2011.

[10] "Rwanda: How the genocide happened," *BBC News*, December 18, 2008, http://news.bbc.co.uk/2/hi/1288230.stm (accessed November 10, 2011).

government officials and intellectuals, leaving the country's universities stripped of their

educators and facilities, thus any previous research (in absorbent materials or otherwise) would

have been lost.[11] This circumstance reveals one of the complexities of socially responsible

design. Each region comes with a unique set of challenges. Thus designers, whether local or

foreign, must adjust their methodology to fit the culture of the community. Rwanda has a tragic

recent history, which is shown in explicit, but also in subtler, or seemingly invisible ways. Though

Rwandan universities lost faculty and resources, the country has rebounded and technologies

and access are steadily rising.

SHE was able to build local relationships and work with various institutes to research

locally abundant and absorbent materials.[12] In mid-2008, the SHE team received a tip from Yuri

Mati, a Japanese environmental consultant in Rwanda who had worked with Tama Art

University in Japan on creating textiles from banana fibers.[13] This lead inspired SHE to

investigate the absorbent qualities of banana fibers, an abundant local material. Scharpf

remembers this time as a defining design moment when the SHE team attended banana

conferences and contacted banana experts around the world for advice on how to develop

these fibers into an absorbent material.[14] SHE also experimented by mixing the fibers in a

blender and saturating them in Coca-Cola to test their absorbency. When the team discovered

banana's absorbent qualities, SHE approached textile experts from the United States at North

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[11] Ibid.

[12] Sustainable Health Enterprises Chief Operations Officer is Julian Kayibanda, an invaluable asset to SHE's success in Rwanda. Scharpf stressed Kayibanda's invaluable contributions during both the June 1, 2011 interview and the April 20, 2012 interview with the author. See also "Welcome Julian Kayibanda, SHE's new COO" Sustainable Health Enterprises blog, July 30, 2009, http://sheinnovates.blogspot.com/2009/07/welcome-julian-kayibanda-shes-new-coo.html (last accessed May 30, 2012).

[13] Elizabeth Scharpf, "Banana Breakthrough," Sustainable Health Enterprises blog, July 16, 2008, http://sheinnovates.blogspot.com/2008/07/banana-breakthrough.html (accessed May 31, 2011).

[14] Scharpf interview with the author, June 1, 2011; Other materials that underwent preliminary testing were bananas, papyrus, cassava and rice.

Carolina State University (no such experts existed in Rwanda at the time) to provide guidance on how to morph these fibers into a practical, absorbent pad. Chemistry students at the Massachusetts Institute of Technology (MIT) also collaborated to develop a way to extract these absorbent fibers to construct a sanitary pad all while using machinery (such as a blender) that was practical for use in Rwanda.

Due to SHE's ambition to replicate its distribution, manufacturing and business model beyond Rwanda, the designers worked to develop a product that could be manufactured regardless of material or location. SHE formalized a relationship with two professors at the Kigali Institute of Science and Technology, who had gained access to lab equipment and were able to hand-produce pads on a small scale. Scharpf consulted Innovationedge and its group of professional consultants previously employed by Kimberly Clark to advance production output, all while maintaining the vision of replication and local manufacturing.[15] In the summer of 2011, SHE used such expertise to launch a testing phase of a prototype pad. The results were positive overall; the pads were absorbent, soft and effective. However, user feedback indicated that some viewed the off-white pads as dirty and that many experienced dampness during use. As of April 2012, the design of the pads was still developing and progressing towards an improved design based on user feedback from the initial prototype.[16] SHE's banana fluff pad technology (patent-pending) does not use bleach or other chemicals to achieve absorption, resulting in an off-white material. Until the technology develops further, the SHE pad designers are adding an additional layer, which will eliminate wetness as well as add to the pad's overall whiteness.[17] SHE also hopes to implement larger beaters and advanced, mechanical equipment to increase

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[15] Scharpf, interview with the author, June 1, 2011.

[16] Scharpf, interview with the author, April 20, 2012.

[17] Ibid. Scharpf stressed that if the design adjustment was just for aesthetics, they would not have implemented it, but it also solved the problem of wetness.

banana fiber extraction and allow for large-scale production in Rwanda.[18] Though SHE is still

working to solidify and streamline the various factors of its initiative, such as distributors,

production-scale processes and technologies, budgeting, etc., significant progress has been

made towards an eco-friendly, affordable, sustainable option that is realistic for its market. In

the future, SHE also hopes to be a global resource for individuals to exchange information and

ideas on utilizing agro-waste materials.

Although the pads are innovative and meeting a dire need through a unique, eco-

friendly design, Scharpf continues to stress the development of a sustainable business model.[19]

The impetus for instigating SHE28 was to design opportunities for women through access to

sanitary pads, but more importantly, through access to education and self-employment.

Sponsorship programs from large U.S.-based companies have existed in the past to provide

schoolgirls with access to pads. While initially successful, such donation programs are often

discontinued, leaving young girls accustomed to using disposable pads without the means to

purchase them.[20] Like many global economists, Scharpf believes that continued access to

business and employment is the most valuable method for creating a sustainable livelihood.

From her perspective, common aid and charity-based initiatives do not provide long-term,

sustainable solutions.[21] So Scharpf is committed to providing small-scale loans to women who

will eventually manufacture, market and distribute SHE's sanitary pads. By using the process

developed collaboratively with MIT, North Carolina State, Kigalia Institute of Science and

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[18] SHE also recently hired Abenezer, an Ethiopian banana fiber expert, as its entrepreneur in residence. Abenezer will travel to the United States to study under North Carolina State University and MIT. He will then transfer this tutelage to increase large-scale production in Rwanda. Scharpf interview with the author, April 20, 2012.

[19] Scharpf interview with the author, June 1, 2011.

[20] Scharpf, *From Scratch*.

[21] Dambisa Moyo, *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa* (New York: Farrar, Straus and Giroux, 2010).

Technology, and Innovationedge, SHE aims to maximize its return on investment by reducing the

production to its most essential parts.

Beyond designing a usable sanitary pad made from local materials and helping women

develop businesses, SHE works to educate women both explicitly and implicitly. Menstruation is

a taboo topic in most cultures and thus some women are often uneducated about personal

health issues. Research suggests that this lack of education causes girls to drop out of school

around the time of their first menses.[22] SHE works to eliminate the social stigma that

accompanies menstruation by sponsoring public forums and educational initiatives aimed at

women's health education.[23] By prioritizing this issue and educating the community, SHE hopes

to instigate holistic change. SHE also received a pledge from Rwanda's Minster of Health to

include their educational content into the national school curriculum, providing nurses and

teachers with health and hygiene resources. The education initiatives are not gender specific,

but work to educate boys and men about hygienic health management as well. Women in

SHE28's community have found that with increased education, men are more willing to reserve

money for the purchase of sanitary pads.[24] Additionally, by proving that women can engage in a

successful business model and generate income, they may be further encouraged to remain in

school. SHE's pads will help facilitate formal education by providing sustained access to pads so

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[22] In many countries, there are social and cultural influences that impact this decision as well, such as the need to marry and begin bearing children. For reports on these influences, see articles such as: Barbara S. Mensch, Judith Bruce and Margaret E. Green, "The uncharted passage: girls' adolescence in the developing world," (New York: The Population Council, 1998). See also Ruth Levin, et al., *Girls Count: A Global Investment & Action Agenda* (Washington, D.C.: Center for Global Development, 2009).

[23] Elizabeth Scharpf, "And the campaign marches on!" Sustainable Health Enterprises blog, November 4, 2010, http://sheinnovates.blogspot.com/2010/11/and-campaign-marches-on.html (accessed May 31, 2011).

[24] Scharpf interview with the author, April 20, 2012. Full quote: "The education component is much more important because…most of the men make the disposable income. We've had this feedback in the past that women were happy that we included men in the health and hygiene education because then they could ask them for a little bit of money to buy pads for their daughters."

that young girls can remain in school after puberty. Providing girls with education increases their

chances of earning a sustained income and studies show that women invest a large portion of

their income in their families, which in theory, increases the economic progress of individual

families, communities and countries.[25]

Menstruation management: a global issue

SHE implements a holistic design approach that provides access to education, business

opportunities, and sanitary pads. However, SHE is not the only venture that employs design

solutions to provide access to affordable sanitary pads for women in developing countries.

Though the end-goal of such initiatives is often the same – sanitary pads access – the

methodology and approach varies.

In the spring of 2009, students from Chalmers University of Technology in Sweden

engaged in a seven-week research project in Kenya to develop products utilizing water hyacinth,

a troublesome and abundant weed.[26] The plant grows on lakes and triples in size daily, engulfing

water supplies. Local fishermen are directly impacted because the water becomes inaccessible

by boat and prohibits them from their employment resources. These students created a product

from the water hyacinth morphing the detrimental weed into a profitable commodity. Paper

products proved to be the most realistic material produced from water hyacinth so designs for

wrapping paper and notebook paper were developed early in the research phase. During the

students' time in Kenya, they observed that girls in Kenya lacked access to affordable sanitary

pads. This discovery shifted their project from paper production to the development of a low-

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[25] "Investing in Women and Girls: The breakthrough strategy for achieving all the MDGS," based on a speech by Jon Lomoy, Director of the OECD's Development Co-operation Directorate, at the Helsinki High-level Symposium, United Nations 2010 Development Co-operation Forum, June 4, 2010.

[26] Karin Lidman, et al. "New Sense in Nuisance," *Reality Studio* (Spring 2009). Downloaded here, http://www.janipad.com/ (accessed October, 2011).

cost sanitary pad. The prototype, named the JaniPad, consisted of four different layers of water hyacinth papers, each having its own absorbent qualities. The second prototype implemented two layers of plastic to further increase reliability and effectiveness.[27] The JaniPad was a recent winner of Victor J. Papanek's Social Design Award, and will be exhibited in a touring exhibition.[28]

This potentially successful idea (the JaniPad is still in it beginning stages of business development and has not been put into production[29]) approaches sanitary pad production from an environmental and social perspective. Since water resources and the local population are negatively impacted by the abundance of water hyacinth, the JaniPad works to re-appropriate this invasive weed into a necessity for Kenyan girls and women. Though the project plans to implement a business model to allow for economic sustainability and development, JaniPad is linked with a donation-based organization, Village Volunteers, and thus takes a different distribution and funding approach than SHE.

In Uganda, Moses Musaazi of Makerere University observed that young girls were not attending school during their menstrual cycle. He also discovered that ninety percent of rural women could not afford the pads sold in local stores and as a result, women turned to natural alternatives typical in Africa.[30] The Menstruation Administration Knowledge Affordability (MAKA) pads are made of ninety-nine percent local materials, mostly composed of papyrus reeds. The pads are manufactured using local tools and implement traditional techniques such

[27] Ibid. See also janipad.com.

[28] "Design for the Real World: REDUX," Victor J. Papanek Social Design Award, Submission Results, http://vjpsocialdesign.madmuseum.org/submissions/ (accessed October 18, 2011). "Social Design Award Winners!" Jani Blog, December 3, 2011, http://www.janipad.com/2011/12/social-design-award-winners/ (accessed May 30, 2012).

[29] Sophie Thornander (JaniPad designer) e-mail correspondence with the author, October 30, 2011.

[30] UNHABITAT, "Provision of Affordable Sanitary Pads to the Disadvantaged Primary School Girls (Makapads), Kampala Uganda," http://www.unchs.org/content.asp?cid=5264&catid=510&typeid=24&subMenuId=0 (accessed October 24, 2011).

as hand-grinding and solar energy for drying. The resulting pad is three to eight times as absorbent as the leading market brands.[31] Such initiatives have offered employment opportunities to women and provide young girls with access to sanitary pads to ensure prolonged education. The MAKApads' production process is a replicable model and takes a similar approach to SHE28. The MAKApads have employed women to produce sanitary pads in refugee camps for example, which offers women both employment opportunities as well as access to pads.[32] MAKApads are sold through a distribution company and do not implement business development in their approach, however the University's initiative is notable for its replicable design solution using local raw materials.

Design student, Cansu Akarsu, was a finalist for the Index Design Awards in 2010 for her padBack design.[33] Akarsu spoke with Musaazi of MAKApads about his methodology, and developed a similar product made from papyrus to addresses a variety of problems. Akarsu's design is innovative because it does not require electricity to produce, is made from an abundant resource, can be made by local women, and is designed to increase soil fertility during its decomposition process. padBack provides affordable pads to young girls to increase education, while also improving natural resources.[34] Though not intended for a particular country, Akarsu plans for her design to be available to rural women in Africa through collaboration with NGO's and other organizations by donating sanitary pads to schools, thereby providing young girls with free access to the eco-friendly pads.

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[31] Ibid.

[32] IRIN Africa, "UGANDA: Sanitary pad project 'changes refugees' lives'," http://www.irinnews.org/report.aspx?reportid=88359 (last accessed October 24, 2011)

[33] "INDEX: Design Challenge 2010," Design to Improve Life, n.d., http://www.designtoimprovelife.dk/designchallenge/submissions.php?designId=48 (accessed May 23, 2012). Initially learned of this project from Sally Piper Pillitteri, "School menstrual hygiene management in Malawi: More than toilets," (WaterAid report, 2011), 18.

[34] Cansu Akarus, "padBack," Cargo Collective website, http://cargocollective.com/cansuakarsu/PadBack, (accessed May 23, 2012).

In India, Muruganandam Arunachalam of Jayaashree Industries: new inventions…small is beautiful, developed a machine that produces sanitary pads from wood pulp. Women in India often use their sari, discarded clothing, or rags to maintain menses flow, but this poses significant health risks. Jayaashree Industries focuses on the development of small businesses and adopts E.F. Schumacher's mantra *small is beautiful.*[35] Jayaashree Industries sells (or donates through partnerships with NGOs) the pad production machine to local women's groups to manufacture and distribute sanitary pads, thereby encouraging small businesses ventures for rural Indian women. The machines are quite expensive and require large, outside donations, so Jayaashree Industries is focused on providing inexpensive pads through machine technology.[36]

In Kenya, the Lwala Community Alliance (LCA) takes a different, less mechanized approach to feminine sanitation. The Women's Sewing Project, a program within the LCA employs local women in sewing co-ops. To encourage women and children to work and attend school during their menses, this co-op sews reusable pads that are then sold to local schools and women.[37] This project is locally focused, but could potentially be replicable in areas where access to clean water is sustainable and abundant.[38]

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[35] E.F. Schumacher, *Small is Beautiful: Economics as if people mattered. 25 years later…with commentaries* introduction Paul Hawken (Washington: Hartley and Marks, 1999; originally published London: Blond and Briggs, 1973). This text was discussed in detail in the first chapter.

[36] "Jayaashree Industries: new inventions…small is beautiful," Jayaashree Industries website, http://newinventions.in/index.aspx (accessed August 15, 2011). See also Reshma Kamath, "Jayaashree Industries: The Low Cost Sanitary Napkin Maker," Korea: Seoul University, n.d. See also, Lakshmi Sandhana, "An Indian inventor disrupts the period industry," Fast Company, n.d., http://www.fastcoexist.com/1679008/an-indian-inventor-disrupts-the-period-industry (last accessed May 29, 2012).

[37] "Women's Sewing Project," Lwala Community Alliance website, n.d., http://lwalacommunityalliance.org/programs/economic-development/womens-sewing-project/ (accessed July 19, 2011).

[38] A similar project, Afripads exists to help girls in East Africa remain in school through access to sanitary pads through use and production. The pads are reusable and made locally, though outside funding is essential. For more information, see Afripads website, http://afripads.com/index.php (last accessed, May 23, 2012).

These are just a few examples of design and business projects that work to bring affordable sanitary pads to women, though each is varying in its holistic design approach. While this list is not exhaustive, it aims to show that a variety of solutions exist for this expansive problem. It is curious that these projects have not been included in past socially responsible design discourse. This has changed in recent years, however, evident in SHE's Curry Stone Design Prize award in 2010[39], and its latest recognition as a Buckminster Fuller Challenge semi-finalist.[40] JaniPad was also accepted into the traveling social design exhibition previously mentioned.[41] In the past, these types of projects would not necessarily be recognized as design and may have been celebrated by women's rights campaigns or public health organizations.[42] Such awards suggest a broadening definition of design, one that includes problem-solving innovation through a system of complex, supporting parts.

The *problem* with women's issues

When social consciousness entered design discourse in the 1970s , Victor Papanek considered design – as dictated by the industrial designer – an unsustainable solution for the world.[43] Thus, Papanek called for a reevaluation of the field, a topic that was discussed fully in

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[39] "Sustainable Health Enterprises, 2010 Curry Stone Design Prize Winner," Curry Stone Design Prize website, http://currystonedesignprize.com/recipients/2010/sustainable_health_enterprises (last accessed March 30, 2011).

[40] "SHE28," The Buckminster Fuller Challenge website, http://challenge.bfi.org/2012Semi_Finalist_She28 (accessed April, 2012).

[41] "Design for the Real World: REDUX," Victor J. Papanek Social Design Award.

[42] For example, the World Health Organization (WHO) mentions women's access to sanitary pads, but often through the lens of post-disaster relief or in an attempt to meet the UN Development Goals. Department of Gender and Women's Health, World Health Organization, "Gender and Health in Disasters," (Switzerland: WHO Publications, July 2002). World Health Organization, Department of Gender and Women's Health, "'En-gendering' the Millennium Development Goals (MDGs) on Health," (Switzerland: WHO Publications, 2003).

[43] Victor Papanek, *Design for the Real World: Human Ecology and Social Change (*New York: Pantheon Books, 1971)*.

the first chapter of this thesis. From a twenty-first century perspective, initiatives like SHE28

offer practical solutions to complex issues. Perhaps one of the reasons that the problem of

access to sanitary pads remains buried is because menstruation is socially taboo and many are

reluctant to bring it to the fore of health or design discourse. Even though menstruation is a

basic health issue, public health groups and designers more focused on life-threatening health

issues such as prenatal care, tuberculosis, or HIV/AIDS may overlook it. However, the issue is

important *because* it is as basic as providing food or clean water. Regardless of the initiatives

taken to combat poverty, inequality, or disease, if half of a population lacks access to a basic

need, sustained progress will prove difficult.

This oversight proves be a reoccurring theme in addressing women's issues. For

example, Scharpf indicates that SHE is supported by two types of people: those who support

entrepreneurs who design replicable business models to sustain operations and those who are

specifically interested in girl's and women's empowerment. Scharpf works to balance SHE28's

women's empowerment initiative with its broader emphasis on sustainable, economic

development.[44] In an interview in June, 2011, Scharpf recalled a conference organized around

social entrepreneurship in which a women's panel was held at the same time as a "large-scale

change" panel. Scharpf described how the women's panel housed powerful, innovative speakers

and attendees, but all were women. Meanwhile, all the men were at the "large-scale change"

panel joined by powerful economists and potential change-makers. She commented, "You are

having this conversation in a silo and can you really change the dynamic of the world if you are

silo-ed? We really want to change things and want equality to access and opportunity. But how

much are you taking yourself out of that if you say you are about girl's and women's

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[44] Scharpf interview with the author, June 1, 2011.

empowerment?"[45] And SHE does work to focus attention on its market-based, business solution, which is pivotal to understanding how the organization actually intends to impact change. Scharpf understands that providing women with access to pads is imperative, but it is just one step in the process to sustainable livelihood. By providing women with the means to develop a business, this will improve their lives, their families, and their communities. Sanitary pads prove to be one way to tackle this complex problem. SHE is an important case study for adding feminist perspectives to socially responsible design because its pilot initiative addresses basic women's health issues. Though the business model is pivotal to the organization's efforts, for this thesis, it is the product SHE provides which directly exposes a gap in socially responsible design history and discourse.

Socially Responsible Design projects for women

Although SHE28 and other sanitary pad initiatives work to address the inherently feminine issue of menstruation, other socially responsible projects have been developed to improve the lives of women in other ways. A number of projects aim to bring health opportunities to women, while others work to communicate the value of women and girls in the developing world. Since problems that face women often go unnoticed, some projects explicitly publicize troublesome facts about girls and women. Others employ women through historic craft traditions and commodify traditional designs for tourist populations or international retail. Several designs are created to aid women in carrying water – a rapidly depleting resource. To understand the issues that impact women and how designers are addressing these problems, examples of such projects will be discussed below. This list draws on examples from the projects

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[45] Ibid.

introduced in chapter two. It is not comprehensive, but is emblematic of the types of projects that receive critical acclaim in the socially responsible design community.

Bangladesh Rehabilitation Assistance Committee (BRAC) is a non-governmental organization based in Bangladesh that also operates in Africa, Asia and Haiti.[46] BRAC works to combat discrimination, poverty and injustice through holistic initiatives that include microfinance, health, education, etc.[47] The organization was established in 1972 and works to empower people to change their lives.[48] BRAC works extensively with women to offer business and educational opportunities to create sustainable livelihood, but they also assist in post-disaster zones to reinvigorate affected communities. One BRAC initiative employs community health volunteers to travel to underserved regions in Bangladesh to educate and assist impoverished populations. The volunteers are trained in health education and can sell and administer medicine (which enable the volunteers to earn money for their efforts). Since women are often underserved and do not receive adequate health care (for an array of cultural reasons),[49] this initiative equips the volunteers with feminine-specific products such as delivery kit, sanitary napkins, salt, soap, etc.[50] Since the kits also contain materials to aid in the birthing process, they work to decrease the fatalities that occur during pregnancy and delivery. These kits and materials provide women with access to vital health resources, but more importantly,

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[46] More specifically, BRAC operates in Bangladesh, Afghanistan, Pakistan, Sri Lanka, Liberia, Sierra Elone, Southern Sudan, Tanzania and Uganda. "Where we work," BRAC website, http://www.brac.net/content/where-we-work (last accessed November 8, 2011).

[47] For a complete list of BRAC's initiatives, visit BRAC's website, brac.net.

[48] "Mission Statement," BRAC website, brac.net (last accessed November 8, 2011).

[49] The cultural reasons for women's position in society and lack of access to health care is detailed by economist Amartya Sen. His findings were discussed at length in chapter two. See for example, Amartya Sen, "The Many Faces of Gender Inequality: When misogyny becomes a health problem," *The New Republic* (September 17, 2001): 35-40.

[50] BRAC health volunteer kits were featured in the Cooper-Hewitt's most recent exhibition, *Design with the Other 90%: CITIES*, http://designother90.org/cities/solutions/health-volunteer-shasthya-shebika-kit. Cynthia Smith, *Design with the Other 90%: CITIES* (New York: Smithsonian Institution, 2011), 202-203.

the health volunteers educate women and provide them with alternative options for managing

their health,[51] thus empowering them.

In 2008 the Nike Foundation launched The Girl Effect a multi-media campaign that

emphasizes the economic and social benefits that result from investing in girls. The campaign

video, website, and poster use slogans such as "The revolution will be lead by a 12-year-old

girl."[52] According to The Girl Effect, twelve-year-old girls are at a critical moment. Presumably,

this is the average age that most girls begin puberty. For young girls in poverty, this signifies that

she is ready for marriage and child rearing. Though at times the message and design of the

video can be menacing or overly simplistic, the message is clear. Young girls in poverty have few

choices other than to marry and begin having children, only increasing their chances of early

death or exposure to HIV. By providing girls with the opportunity to remain in school, the

chances of such risks diminish. The Girl Effect campaign claims to have a solution: small-scale

loans will provide young girls with exposure to sustainable development and thus improve their

lives and chances of survival. However, the path to a solution is not always the same, some

videos emphasize the importance of providing young girls with a goat, which will help clothe and

feed her and her family. Others encourage donations to help pay for school uniforms and

supplies so she can remain in school. The focus of this campaign is to educate the [Western]

masses, regardless of geographical or economic location, that there is a value in investing in

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[51] Description of BRAC health volunteers from BRAC's website, http://www.brac.net/content/shasthya-shebika (accessed November 3, 2011). "*Shasthya Shebikas* (Health Volunteer) are our community-based health volunteers in both rural and urban areas delivering health services. They are health volunteers trained to provide health services, such as, organizing health and nutrition education, mobilizing and motivating women to use modern family planning methods, educating and mobilizing women on immunization, selling essential health commodities, treating basic ailments, promoting sanitation and referring patients to health centers when necessary."

[52] The Girl Effect was featured in the Cooper-Hewitt, National Design Museum's Triennial exhibition, *Why Design Now?* which opened in the spring of 2010. Ellen Lupton, et al., *Why Design Now?* (New York: Smithsonian Institution, 2010), 150-1. See also, The Girl Effect website, http://www.girleffect.org/question, (last accessed November 8, 2011).

young girls. The Nike Foundation encourages donating and spreading the ideas of the project,[53]

and provides ample resources for further reading.[54] Although this design is not sustainable – it

relies on foreign aid and donations – there is value in taking advantage of the multitude of

available media options in Western societies. By allowing the video to spread online, The Girl

Effect's message can reach a critical mass, further highlighting the issues that plague young girls

internationally. Though the issue of developing a project entirely reliant on donations is

problematic,[55] exposure to these issues will hopefully educate people on the global issues

surrounding women. And for this reason, such initiatives are valuable.

Countries throughout the developing world often lack access to clean water. Industry

runoff leads to ground and well contamination in addition to river and lake pollution. In other

areas, fresh water sources are disappearing. Thus, women – the primary water collectors in

many regions – are forced to travel great distances to collect water for daily needs such as

sanitation and cooking. According to a study undertaken by the World Health Organization,

roughly one billion people worldwide lack access to safe drinking water[56] and mostly women

and children are negatively impacted by this depleting resource.[57] In the early 1990s, two men in

South Africa designed a plastic rolling device – the Hippo Roller – that would enable easy

transport of nearly twenty-two gallons of water. Such a design rapidly improved the ease of

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[53] "What can you do?" The Girl Effect website, girleffect.org (last accessed November 3, 2011).

[54] "Learn: More resources," The Girl Effect, http://www.girleffect.org/learn/more-resources (last accessed November 8, 2011).

[55] Mayo, 2010. The problems with aid and development were discussed further in previous chapters of this thesis, though it is important to highlight this problem here.

[56] "Household water treatment and safe storage," World Health Organization, http://www.who.int/household_water/en/, (accessed November 8, 2011).

[57] Media Centre, "Access to safe drinking water improving; sanitation needs greater efforts," World Health Organization, http://www.who.int/mediacentre/news/releases/2010/water_20100315/en/ (accessed November 8, 2011.

water collection for rural women.[58] However, Emily Pilloton of Project H, worked to improve the

device by implementing a number of design adjustments that would increase the longevity of

the roller. To reduce the transportation costs, she re-designed the vessel so that it could

separate in two and would thus be stackable and more economical.[59] Pilloton has been criticized

for her improved design because the plastic material she selected for the re-design was quite

durable but not eco-friendly, leading critics to ponder its impact and potential long-term

negative consequences.[60] This project is infamous within the socially responsible design

community; praised for its innovation but criticized for its use of plastic and expensive price tag.

Users cannot manufacture, produce or afford to purchase a Hippo Roller and are thus reliant on

foreign aid donations.[61]

 Women in Uganda often do not have access to sustainable businesses or work

opportunities, but many have extensive craft training. BeadforLife is a non-profit organization

that works to help women obtain a sustainable livelihood by providing entrepreneurial training,

access to savings and bank accounts; in rural areas, it provide site-specific agricultural

development consultation. BeadforLife trains women to make beads from recycled paper – a

readily available resource. The beads are then sold to retail facilities around the world. The

profits help women in Uganda start businesses, own homes, and elevate their families out of

poverty. BeadforLife hopes to educate the world about cases of extreme poverty through the

paper beads (an educational insert accompanies each jewelry sale). This initiative has helped

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[58] Nick Moldan, "Imvubu's Hippo Water Roller: Facilitates water access in rural African communities," *RotoWorld* (January-February 2010): 28-32.

[59] Alissa Walker, "Balancing Tradeoffs: The Evolution of the Hippo Roller," Fast Company, July 14, 2009, http://www.fastcompany.com/blog/alissa-walker/designerati/project-hs-hippo-roller (accessed November 8, 2011).

[60] Ibid.

[61]Anthony Crabbe, "Three Strategies for Sustainable Design in the Developing World," *Design Issues* 28, no. 2 (Spring 2012): 8-10.

launch other craftspeople to learn the trade and develop niche markets within their

communities.[62] Wearers of BeadforLife do so in recognition that by donning these beads, they

are participating in the global fight against poverty.

These are just four examples of socially responsible design initiatives that address

women's issues internationally. Each varies in approach and product, and thus offers an

opportunity to critique how socially responsible design projects address women's needs (this

critique is continued from chapter two). BRAC and its health volunteer kit are a grassroots effort

that emerged to solve important community-specific issues. It does not rely directly on foreign

aid, nor does it rely on international acclaim. Though branches of BRAC exist in numerous

countries, it does not work to publicize or commodify extreme poverty. BRAC tackles similar

problems that SHE addresses. Since women are often marginalized by society, organizations can

combat this in varying ways. BRAC does so by engaging entire communities – seen in the

community health workers initiative that provides health and sanitation aid to impoverished

women. This organization prioritizes gender equality through health initiatives, recognizing that

if health is not a focus, other programs will not be successful.

The Hippo Water roller aids women in fulfilling their traditional roles within their

societies. Communities, both rural and urban, rely on women to collect water for cooking,

cleaning and daily health. As water resources are rapidly depleting, women must travel greater

distances to find usable water. Carrying water on the head or back for extended periods can

lead to health problems; it can also be inefficient. The Hippo Roller works to ease this task

through an easy, user-friendly design. Yet this begs the question, how could this problem be

addressed more holistically? While the design greatly improves lives, it is still not solving the

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[62] "BeadforLife: Eradicating Poverty on Bead at a Time," BeadforLife website, n.d.,
http://www.beadforlife.org/about-origin.html (last accessed November 9, 2011).

entire problem. The water container is still reliant on outside funds and resources; each is produced abroad and must be imported into the community. In a conversation with Kristoffer Leivestad Olsen, project manager for Design without Borders a leading organization that works with designers in developing countries, he criticized similar designs for their failure to consider the culture of the end-user. He mentioned projects similar to the Hippo Roller and how they were negatively received by some women because culturally, the women enjoyed the solitude of gathering water. By providing a new, modern design, this time was taken away. Many men wanted to use the device to gather water. What was once women's work became a playful time for men.[63] While water containers are invaluable, the design must consider how the work relates to the community. Such an example reveals the problem with "parachute" design or designing "for", not "with" communities.[64]

The Girl Effect and BeadforLife vary slightly from the others in their origin and purpose. Both work to provide women with small-scale loans to eventually generate business and economic growth for a community. Yet, both are entirely reliant on contributions from an outside, presumably Western source. The Girl Effect and BeadforLife hope to educate the Western world about the impacts of poverty through a mass-market approach. The Girl Effect problematizes global poverty and the answer is a girl. While it is valuable to educate the global population about the importance girls and women have in society, this solution seems overly simplistic. BeadforLife helps to educate the masses about the dangers of poverty by selling each piece of jewelry with a small insert that describes the organization's efforts to elevate women out of poverty. Though the organization has an important message and approach, it still turns the developing world and women into a commodity. While the organization provides training in

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[63] Kristoffer Leivestad Olsen in conversation with the author, October 17, 2011, United Nations.

[64] For more information on the problematic impact of parachute design, see Krista Donaldson, "Why to be wary of 'design for developing countries'," *Ambidextrous* (Spring 2008): 35-37.

bead production, it is in danger of limiting the growth of the women it employs by siphoning them into the tradition of craftsperson. Though the organization claims to provide entrepreneurial training, it begs the question of how bead production can create long-term sustainable livelihood. The beads are available for purchase at many popular retail outlets in America, but what will happen when the necklaces fall out of fashion? Since BeadforLife is a rapidly growing company, employing hundreds of women in Uganda, what will the women do when the market depletes? BeadforLife is a short-term solution, to a rapidly growing problem.[65]

Concluding remarks

This chapter continued the feminist perspectives presented in chapter two to reiterate the value in viewing women not as a singular entity, but rather as producers, users, creators, and beneficiaries. Many socially responsible design projects are directly reliant on the efforts of women and aim to improve daily lives, but it is important to remember that many originate from patriarchal structures. By examining the designed system of SHE and its initiative SHE28, this chapter explored the ways this solution views women as dynamic contributors to society. The additional socially responsible design case studies detailed in this chapter helped to examine how other projects aim to ease or enable women's specific roles within society. This chapter recognizes the cultural and economic value of such projects, but suggests the addition of sanitary pad initiatives that aim to serve women's basic health needs. This final chapter hopes to cement feminist perspectives of the field by exposing and filling the gap in socially responsible design history and discourse.

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[65] For a similar perspective on the idea of craft for the developed world by women in developing countries, see Angharad Thomas, "Design, Poverty, and Sustainable Development," *Design Issues* 22, no. 4 (Autumn, 2006): 54-65. Victor Papanek also alluded to the potential danger in what he termed "souvenir-like objects" that are created for export economies. The danger lies in that this, "merely ties the economy of that country to the economy of other counties." Papenek, 71.

Conclusion

Argument in review

      This thesis has examined the relationship between women and socially responsible

design through a case study analysis of Sustainable Health Enterprises (SHE) and its initiative

SHE28. It has also investigated other critically acclaimed design initiatives focused on addressing

women's needs. Through a historical and feminist lens, this thesis aimed to investigate how

women, design, economics and development interact on a global scale, and has explored the

emergence of design solutions that are innovative in their attempt to mitigate these various

components. This analysis suggested that SHE exposes patriarchal structures of socially

responsible design by striving to fulfill the need for sanitary pads. This thesis has worked to fill a

gap in the field's history by adding feminist perspectives.

      In order to critically analyze socially responsible design, the first chapter traced a history

of the field's practitioners and scholars. Charting this evolution helped to demonstrate how the

field has evolved from early socially conscious architects such as Buckminster Fuller[1] towards

the industrial design polemic, Victor Papanek[2] and its later expansion to include 'design thinking'

and systems design.[3] This progression exemplifies how the field adopted a design consciousness

that equally considered economics, development and the environment. To understand this

integration and inclusion, this chapter introduced development theories and texts that are

credited with bringing this consciousness to design. This chapter chronicled this history in order

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[1] For more information on Buckminster Fuller, see Thomas T.K. Zung, ed., *Buckminster Fuller: Anthology for a New Millennium* (New York: St. Martin's Press, 2001); see also R. Buckminster Fuller, "Fifty Years Ahead of My Time," *The Saturday Evening Post* (March 1977) 44, 104.

[2] Victor Papanek, *Design for the Real World: Human Ecology and Social Change*, introduction R. Buckminster Fuller (New York: Pantheon Books, 1971).

[3] See Tim Brown and Jocelyn Wyatt, "Design Thinking for Social Innovation," *Stanford Social Innovation Review* (Winter 2010): 30-35; and Victor Margolin and Sylvia Margolin, "A 'Social Model' of Design: Issues of Practice and Research," *Design Issues* 18, no. 4 (Autumn 2002): 24-30.

to examine SHE's relevance and inclusion within it. For what makes SHE innovative is not only its

female-centered product, but also its focus on education, establishing local businesses,

development, and increasing opportunities for women.

       The second chapter revisited a number of socially responsible design's historical texts

introduced in the first chapter to critically investigate the ways that women's needs were

addressed. By using prominent gender and design scholarship, this chapter investigated socially

responsible design in an effort to construct feminist perspectives within the field. It briefly

introduced and analyzed the types of projects that are commonly celebrated within the field to

investigate the field's patriarchal structures. Additionally, the second chapter analyzed the

findings of economists and examined policy documents to contextualize the international

culture that surrounded the emergence of socially responsible design. Numerous policy

initiatives strive to combat gender inequality, and such efforts have likely led to an awareness of

women's needs and many socially responsible design projects reflect this awareness. But, this

thesis argues that the types of women's needs most often addressed overlook *basic* needs, and

rather focus on women's needs as a user or producer for her community and family. This thesis

does not call for an eradication of such projects, but rather the addition of projects that serve

women's basic health needs such as menstruation management.

       The final chapter presented SHE and detailed the evolution of its pilot initiative SHE28 to

explore its problem solving approach to the complex issues that affect women. By detailing the

organization's progression, this chapter acknowledged a basic need that is often unmet by

designers. It is noteworthy that other projects work to achieve a similar goal by providing

women with affordable sanitary pads. By introducing additional projects, this chapter provided a

comparative analysis of alternative approaches to achieving menstrual management. This

chapter suggested that SHE's market-based approach is innovative for its focused attention to

business ownership and an environmentally conscious mode of production. This thesis does not wish to celebrate SHE pads as the only such product women should use, but rather uses this organization to critically investigate how women's needs are addressed by socially responsible design practitioners and scholars. Other projects that address women's daily needs (outside of menstruation management) that were introduced in the second chapter were detailed further to present types of projects that are more typically executed and celebrated within this design field. This chapter helped to establish a critical analysis of socially responsible design by adding feminist perspectives.

Concluding remarks: Looking backward and moving forward

Managing menstrual flow is a universal health reality constant to all women regardless of class, race or nationality. Of course, a woman's ability to manage this monthly occurrence is dependent on income, location and societal cultures. If women have sustained access to sanitary pads or tampons, menstruation is a monthly occurrence rather than a problem or hindrance. While women in developed countries have benefited from products (reusable and disposable) that enable them to continue life uninterrupted, this was not always true. In fact, in a post-Industrial Revolution world of increased mobility and urban living, issues of menstruation and even public latrines for women were heavily debated.[4] In developed societies throughout the twentieth century and even today, the ability to manage menstruation suffers from negative social stigma. Sharra L. Vostral wrote a text *Under Wraps: A History of Menstrual Hygiene Technology* in which she details the progression of women's access to items like sanitary pads as well as women's continued struggle to manage menses in society. Vostral investigated how

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[4] See for example, Barbara Penner, "A World of Unmentionable Suffering: Women public conveniences in Victorian London," *Journal of Design History* 14, no. 1 (2001): 35-51.

women combat societal prejudices and taboo perceptions of menstruation. As a result, a

growing awareness in women's health emerged. Vostral wrote,

> By the early 1970s, it became clear to feminist in the women's health movement that
> women needed more control over their own bodies concerning medical decisions...The
> lingering haze of menstrual prejudice and the way that menstruation continued to be
> viewed as a liability contributed to the devaluation of women's biological identity.
> Feminism raised the troubling question of how to celebrate a uniquely female bodily
> process while not being simultaneously defined by it.[5]

This quote demonstrates that SHE28 in Rwanda is not that far removed from the problems that

plagued (and may continue to plague) the developed world; the stigma surrounding

menstruation is pronounced, even in Western societies. Such societal (mis)conceptions may

reflect lack of education, but also patriarchal structures. In 1976, Janice Delaney, Mary Jane

Lupton and Emily Toth published *The Curse: A Cultural History of Menstruation*, the first text of

its kind that detailed the realities of menstruation in history as well as modern society.[6] In 1988,

the trio published a revised and updated text,[7] which continues to chronicle the taboos and

myths that surround menstruation in various cultures. Such texts are important for revealing the

lack of education surrounding the complex subject even in a modernized, seemingly progressive

society.

SHE proved a valuable project for investigating the relationship of socially responsible

design and women because one of SHE28's goals is to combat the social stigma and hindrance of

menstruation. While SHE is complex in its social enterprise approach and focus on education, its

product highlights an area within socially responsible design that can be developed and

expanded. SHE is an extreme example of fulfilling a woman's need, revealing that historically,

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[5] Sharra L. Vostral wrote in her text *Under Wraps: A history of menstrual hygiene technology* (New York: Lexington Books, Rowman & Littlefield Publishers, 2008), 6.

[6] Janice Delaney, Mary Jane Lupton and Emily Toth, *The Curse: A Cultural History of Menstruation* (New York: E.P. Dutton & Co., Inc., 1976).

[7] _____, *The Curse: A Cultural History of Menstruation* (Illinois: University of Illinois, 1988).

socially responsible design has not adequately worked to meet all the needs of women. Although SHE is a developing organization and the long-term success of SHE28 has yet to be determined, it still proves a useful project to research for it works to solve a problem that was absent from design discourse. This absence allowed for the addition of feminist perspectives to ensure that the field evolves with to include the health needs of women.

SHE28 also provides an opportunity for women in the developed world to critically consider the menstrual hygiene products available for purchase. SHE28 and other eco-friendly, self-sustaining initiatives might be an inspiration for a reevaluation of the types of products used on a monthly basis in all parts of the world. Perhaps the developed world can learn from SHE's innovative system-design solution to affordable and eco-friendly access to meet a basic need.

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Appendix I

Interview with Elizabeth Scharpf, June 1, 2011

Sustainable Health Enterprises offices, New York, NY

Natalie introduces thesis and the plan to discuss gender and socially responsible design.

Elizabeth: I'm not a designer by any means. I feel like our team is a design holistically, but my background is business and economics.

Natalie: Can you give me a little background on you and the organization?

Elizabeth: When I think about what you're writing and I think about what where we sit an interesting angle might be – our biggest advocates are actually successful entrepreneurs who believe that you can't just do the traditional [lead] model, they believe in having a business model of some sort that can be replicable and revenue sustain the cost or cover the cost of running the operations. That is a big piece of what we do, but a lot of people that support us are also specifically interested in girls and women's empowerment. I think we have a lot of partners with people and organizations like that. But I can't help but always come across the dilemma of if you get silo-ed into that space, then are you really changing the whole environment? For example, I was at this conference called SKOL, which is about social entrepreneurship. They had a whole panel that was on change and changing the environment, women empowerment. And then they had another panel at the same time that was "Large Scale Change." And all these kick-ass women were in the women's panel and it was like all men and the chief of the bureau of the Economist was running the Large-Scale change panel and it was like, all men. So you are having this conversation in a silo and do you really actually change the dynamic of the world if you are silo-ed into that. So I think that I've taken that to heart that we really want to change things and we really want equality of access. Well, equality and access to opportunity is what we are really

about. How much are you taking yourself out of that game if you say you are about girl's and women's empowerment? Just an issue that you will come across and something that we always come across.

One women that I just had lunch with is a successful entrepreneurs asked me, "so when did you get into women's empowerment stuff?" and I said, I've never really been in women's empowerment stuff, what do you mean? And she said well, what you're doing. And I said, well what we're doing is jump-stating businesses or helping instigate businesses for people that typically don't have access to that opportunity. 80% of those people happen to be women. Sometimes you leave some people out in terms of women's empowerment. But we're hoping that it's a more inclusive use of language and also model that will really shape the playing field rather than be silo-ed. Those are some of the issues in "gender and design" that keep me up at night. And how do we have big – because we're a small social venture and we don't aspire to be the World Bank, nor will we ever be the World Bank – so how do you actually create change? And don't mis-interpret what I'm saying – there is definitely a gender piece to it that is in my heart very much – but how do you not be dismissed by half the world? "Oh, it's a women's issue…" How do you get legitimacy and really change things? I think our role is really to be disruptive by being successful in outcomes. And yes we are going to say – oh by the way – the story is we are creating these kick-ass sustainable business models that have these huge economic, health and educational impact. And oh, by the way, the problem we are attacking happens to exist because its typically deemed a women's issue and there's a huge portion of the population that has been not tapped in terms of being a fantastic resource and that's women and girls. But I think you need the successful model first and oh by the way this. So then everyone pays attention. You're not silo-ed, you're not having a conversation in the corner with all the Gloria Steinem folks. That's something that I always think about.

Natalie: Makes comment, relates to what thesis aims to address. How was SRD field set up and inherently exclusive?

Elizabeth: I think we also have the privilege of seeing the fantastic breakthroughs that people 30 years ago have made for us. And we're in the United States, so just thinking about the American designer, so I don't have to necessarily be disruptive in the way that they did, brim a bra. Maybe if it was 30 years ago, we'd be burning pads (laughter). So I think there's definitely that content like you were saying. And I get into a little bit of, there is [sometimes] a generational. So my colleague, Cece who is fantastic. She comes from the girl power school of thought. We are a good balance because sometimes I'm a little bit too much like – 'oh it's a return on investment, blah blah blah.' But I think that's also something that's a contentious issue within the different spaces. And it's contentious because it comes down to where you put your resources as an organization. Let's say we invest some money in time and resources in having people – let's say health education for girls and women, but at the same time that's taking away resources from investment in the business part of things. Is this really about girls and women? Or is it about – maybe we need more money in research and development on agro-waste. So then you start saying – what's more of a priority to us? And both of them will help us get to the end goal, but you come into that contention based on where your values lie.

Natalie: Why Rwanda? How did you settle on that as a location for this project?

Elizabeth: So again, you could say – oh, we settled on Rwanda because there was evidence that girls and women were missing school and work because pads were too expensive. It was a small country - 10 million people – easy to get around easy to start a pilot. It had a business environment; the laws supported business – you could start a business in 24 hours. But….these are all the business-oriented things. But then there is also – oh by the way – it has the largest %

of women in the government in the world. It's about 56%. I don't think these two things are necessarily in conflict with one another. Or more of a determining factor. They also have networks of women – community health workers or women's groups. So we didn't want to be community organizing. So all these made for good business environment, but also we knew that because we were working in an issue that is more women-oriented than male-oriented, I think that played into us going to Rwanda as well.

Natalie: Do you ever see it expanding elsewhere?

Elizabeth: Oh, yeah. We actually, I just said orivois [goodbye] to a guy – its our first on the ground male partner (although we have some community health workers that are men) but he's going to Tanzania to do a needs-assessment there. We have lots of people emailing and calling to see if we'll go other places. But really we're just concentrating on – we rolling out manufacturing in Rwanda. It's challenging and my colleague is on maternity leave, which is why I was in Rwanda. So we just want to make sure that we solidify our success in Rwanda first.

Natalie: Is there a factory in Rwanda?

Elizabeth: That's what we're building right now. Fabricating machines and I was just over there showing them blueprints and procuring materials to set up a partnership with Kagali Institute of Science and Technology to do the…We've done this innovation in fluffing the agro-waste, which is right now banana fiber with MIT and North Carolina State but want to have local optimization of the fluffing. And if we need to do other materials, then we want them to own it. It was a partnership that was created a couple of years ago that now we're really...having blenders and stuff like this. Before there was no lab equipment in the universities because of the genocide and things like that.

Natalie: How much does the culture of Rwanda play into how you have worked there?

Elizabeth: Hugely. Huge. Everything from – there are daily reminders I'm sure for people. I just found out that one of my colleagues was the only genocide survivor in her family. She had seven brothers and sisters and her parents were killed too, so. That's why she's in health training. Before she used to do PTSD mental health training and now she's our trainer in health and hygiene education. There are memorials everywhere. A couple of years ago when we were first looking into different kinds of agrowaste we went to all the universities and we ended up talking to the professors there to see if there was any existing information on the absorbency of agricultural materials. And the guy just looked at me and said all the people with PhDs and advanced degrees were killed during the genocide. All the universities were decimated, so they don't even have lab equipment. Luckily, they have lab equipment now, so that's good. They have this crazy $50,000 micro-spectromator thing that no one knows how to use in the country. They have it – it's the only one is East Africa. But like, do you guys have a blender? There is everything from people-aspects of the genocide but also the physical structural aspects of what happened during the genocide and there are still remnants of that.

Natalie: It was so recent….

Elizabeth: I think part of the reason they have some many women in government is because so many of the men were killed. Women were really a huge part of the rehabilitation and lifted a lot families out of poverty. More than poverty, just disaster. So you have a lot of women in leadership.

Natalie: How did you do decide on banana leaves? How did that come about?

Elizabeth: I think in general, we are very much raw material neutral. We are mostly about creating a system that can sustain itself. So if at the end of the day we end up using other materials and a guy in Uganda ends up actually using papyrus for pads. We are fine with that. Whatever is locally available. But also, our goal is to increase access to essential consumer

product good. So we might bring in wood pulp fiber from, I don't know, Kenya or South Africa or something like that. But ideally we would use local materials and when we were first there in 2008, we actually found out that about ½ the cost of the pad was from the absorbent part of the material. It was coming from Europe. So that is why we started looking into substitutes for that. Like I said, we went to all these different universities and we asked if there was any studies done on absorbency of different materials and no there hadn't been. We basically looked at all the crops that were grown and readily available in Rwanda. We had some different candidates. Then we came up with some criteria – ok it has to be readily available, can't be used for food because we don't want to compete – like pads vs. food – and could be absorbent. So, we just started doing our own little testing. We had come across this woman and she had worked with Tama Art University. She told us about using it in clothes. So then, we crashed these banana conference and started emailing all these banana experts around the world. And it seemed like there was a huge obstacle in making it, as a lot of plant material, it has a cellulose and has a waxy substance (20:00). That was the big problem – how do we get rid of that part? So you could use baking soda or steam blast it, but there were some studies on that. But we did our own testing and found that it had some absorbent properties. We used Coca Cola; we had pots and all this stuff. So we came back and said, lets do something about this. We started looking around and said, where in the world can we find textiles experts. Unfortunately, they didn't have any in Rwanda, so that's how we ended up at North Carolina State. Then I was with some students at MIT and we got MIT on board with their chemistry department and they were able to come up with some mechanical – just like using a blender – figuring out how to make it just as absorbent as that existing fiber. So it doesn't compete with Always. Always is really absorbent not because of the fiber but because they use chemicals call super absorbent polymers. And those are really hard to biodegrade. It takes 10,000 years or something crazy like that. But it's

better than the benchmark in Africa. Which is Medicot, a generic brand. So that's where we're starting – its called Pad 1.0, we call it the Launch Pad. But I just talked to, we hired a group that used to work at Kimberly Clark to take us up to a more sophisticated level. Right now we have a mini-machine that's about the size of this table and its turns out 5-6 pads a minute with one person working. The quality is okay. It's just not that consistent. We are trying to figure out – because we can bring these really sophisticated professionals on board and also have the local ownership that we together we can get it to Pad 2.0. The goal really is to – we want to come up with a sustainable, replicable model. So that if we go to India and they only have pineapple fibers around, then we want to use that, we don't want to start from scratch. And they have the same vision.

It's about hitting those different milestones. Finish our role-out in Rwanda, prove not only that its good product, etc. but also prove that we can sell it. That the other part of design – its really systems design. Its not just about throwing a cheap pad at the problem, it trying to figure out how to do you start up businesses, how do you get people to be entrepreneurial that typically aren't in the way we are talking about. They might be very entrepreneurial in farming, but not in sales and marketing. How do you tap into networks that would be great in distribution but aren't typically distribution networks? Like community health workers – they are very close to the community, but they've never actually sold anything. Are those the right people to be selling? The huge price driver in pads and other things of this nature is actually all the middle people because everyone takes a cut. So that's really the key, its not about product, per se. Its about yeah its partly product, but its about designing the system to get it from – manufacturer to end consumer – without everyone jacking up the price. That's really the key to cracking not just pads, but everyone from clean water people with their filters. I saw the last exhibit – Why Design Now? – and all those little gadgets and this and that. And I thought,

everything in this museum right now needs to crack the nut that we're trying to crack right now. How do you get it from the product designer to end consumer? If you can't crack that nut, then it's going to be sitting in a museum and that's it.

Going back to gender and design, I think women haven't necessarily been tapped to play that role. When I think about what it takes to crack that nut. Its things that a strong fabric in the community, like you're going from one person to the next – women are very – an entrepreneur is defined as someone who doesn't have a lot of resources that can make things happen. That's women. There is a lot of gender play in this. Its different than shouting – we are working on women's issues. Today I was listening to an BBC radio show and it was about food security. And from the US to developing countries it is going to be a big problem. Prices are supposed to double by 2030. You get everyone's attention. It wasn't until about 15 minutes into the interview that the person said, 'so do you think women will play a role in this.' And the other woman was like – ummm yes. 80% of all – supposedly the biggest employment opportunity in the world is 1acre farmers. And 80% of all 1 acre farmers are women. So she threw out those stats and we were like – damnnn – you already get everyone's attention.

Interview is interrupted, casual conversation and then it ends.

Appendix II

Interview with Elizabeth Scharpf, April 20, 2012

Sustainable Health Enterprises offices, New York, NY

Natalie: General update

Elizabeth: In the past year, first of all, our team has grown and that's a reflection of what we've been doing. When Julian came back from maternity leave (and that's another thing to keep in mind [gender]) we actually formalized a partnership with the Kigali Institute of Science and Technology. We have two professors there (one is Rwandan one is Kenyan) now that they have lab equipment, we actually formalized an agreement so that they are producing pads on a small scale (this of blenders) and actually hand-doing the production right now so that we could do our next faze which is testing of the pads. On a broader basis. We had over 50 people take part in the testing (including myself) from the US and Rwanda which is more important for us. Innovation Edge who used to be the Kimberly Clark people helped us come up with the testing methodology and protocol and so my team in Rwanda (we now have about 6 people) the two professors, Julian who runs the show, who is very critical, and two junior business investors, and now we have two health folks (director and higher manager) they tested with our existing communities that we work with our community health workers. And we got feedback, which was really interesting.

1. The good feedback:

    a. Effective, you could wear it for at least 4 hours

    b. Good adhesive, so we didn't actually need to use wings at the time

    c. It was soft because of banana fluff

2. The negative feedback/critique:

      a. A little bit of wetness, more than typical because we need to optimize

         fluffing

      b. It looked dirty and that's because we don't use bleach.

[Not using bleach] is actually one of the value propositions of what we use. That process of making agro waste absorbent with no chemicals is something that we filed a patent for with our partners in the United States, which could be potentially very valuable but ironically, it seemed to be a negative aspect. This is a big obstacle for us so we are trying to learn from the US consumer market. And luckily 7th Generation is part of our board. So we are trying to talk to them. When did it change? When did this mentality of consumer behavior and perception of eco-friendly being good – how did that change or evolve? Can we do the same thing? And how quickly? So in the short term we are actually going to add a transfer layer, its going to be right over the banana fluff and it will make it look whiter and will actually help on the wetness side, too. We wouldn't have probably done it if it was just about color, but its actually going to – but it increases our cost by like a cent a pad, which is significant when our costs are only 3 cents a pad.

So that's the big step right now. We hired a guy from Ethiopia. He is going to be our SHE entrepreneur in residence and he is going to work under the North Carolina State professors (he has a background in banana fiber textiles) so he's going to come to the US and be under their tutelage for a month and go over with a big beater and transfer to larger scale manufacturing, which is really exciting.

Over the past few months, we've been doing a few things. One, is we have been trying to expand our supplier base for banana fiber, so we are trying to create a marketplace because the partners that we were working with in Rwanda started gouging us on prices. So then we went to Uganda and we got them cheaper there, so we are trying to create this market. Figure

out how much fiber we need, when we need to have it, what the lag time is. We have extractors which increase the rate of extracting fibers by 30x the rate of manually, which we had been doing before. And we are trying to figure out, do we own this extractor, do we rent it to the community? What's that dynamic, so we are setting up some experiments in that right now. The extractors that are ours now, before we were borrowing them from the textile company in town.

From the suppliers all the way to…we are going to put the big beater in Kigali. Then we're actually trying to figure out – who are our entrepreneurs, what are our criteria. Maybe it's a soft opening and we work with an existing organization or women's group that already does business skill-type training rather than recruit our own separate ones. That's what we're in right now. The larger-scale beater is hopefully going to be in the country by the end of the summer (7:46). And then Abenezer (Ethiopian) will train our team with the big beater. And we'll get that going. So right now we are actually signing clients for the…so we are trying to figure out how much production we should have in the more medium to larger scale. So, its good. I think…

Natalie: So right now, what are the initiatives that you have established? You are offering the pads that are already in the market for a cheaper price.

Elizabeth: Yes

Natalie: But now you are trying to recruit those same people but to be then using your pad. Are those the same that distributed the test run also?

Elizabeth: I don't think so. But they'll be our distributors. Some of them, some of them worked well, others didn't (she laughs). Those are community health workers, so they wouldn't be our manufactures. We'd be looking for a different skill set. They would team up with our….

Natalie: How many different players would then be involved?

Elizabeth: [She draws} We have suppliers here (Uganda). She explains map.

Banana fibers from Uganda. We have our Beater in Kigali (Abenezer) he makes the fluff. It goes

out to – we are calling them Assembly Facilities. We'll have the assemblers and distributors. We

want wholesale customers and retail. Right now we are trying to get wholesale customers

because retail is harder.

Natalie: If you had to go the retail route, what sort of places would that be?

Elizabeth: Our community health workers and kiosks.

Natalie: If its just wholesale, how would that differ?

Elizabeth: We'd sell to youth centers, schools, education.

Natalie: How many farmers are you using?

Elizabeth: A dozen, and that will continue to increase

Natalie: Is there enough initiative for the farmers to participate?

Elizabeth: The Rwandan farmers found out we were an international organization. It's the lack

of a market that caused this. Now that we're working with Ugandan farmers, they are willing to

lower their prices.

Natalie: they were working with talking to a Co-Op to have an education reimbursement, is that

still in the works?

Elizabeth: The overall takeaway on that research was to uncover, the dynamics of working with

different farmers and what would incentivize them – perhaps its education. We were just doing

research. The education component is much more important. Because without that knowledge

then – and most of the men make the disposable income – we've had this feedback in the past

that women were happy that we included men in the health and hygiene education because

then they could ask them for a little bit of money to buy pads for their daughters. So we met

with the Minister of Health and she pledged to committing to including our content in the

National curriculum, which would be going to all nurses and we're hoping that the Ministry of

Education will do that as well so that all teachers will have this content too.

Natalie: It's about the multifaceted nature of the organization that's interesting.

Elizabeth: Dr. Anush – Ministry of Health.

Natalie: It's great that there are women in power that can help enable these decisions. The

SHE28 initiative is just the initiative that includes the pad initiative.

Elizabeth: We've changed our mission statement.

"SHE invests in people and ideas that are typically overlooked as vehicles of social change. "

Natalie: Whats the future? You have a number of different assembly facilities – but how much

expansion do you see in the coming years.

Elizabeth: The goal right now is to put all the pieces together. Budgeting, Large-scale tech,

distribution -which we've piloted all of them. We've put all these things together on the

production and really cover the operating costs based on revenue. Some of the things to do

that, we are also looking at product extensions. What else can we use the banana fluff for; and

more premium products? Because ultimately that would lower the price of the fluff, which

would lower the price of the pads. We are brainstorming - not only things like diapers but

things you haven't thought of. Like packaging, well that's not really premium, but, is SHE fluff

going to be the next gortex or material. We are brainstorming and taking a look at that. We did

automated all the assembly of the pads to fulfill for example a huge UNICEF or walmart order,

what would that take? What capital? What HR? We're also looking at other raw materials.

Abenezer is going to be testing which materials to test. We do our franchises in other places. We

are checking out the Caribbean and India this year. So we're looking at - would sugar cane work?

We are redoing our website so we can have DIY platforms so that people can look at: well we don't have banana fibers, but we have sugar cane, how can we do it with sugar cane? To make it available for everyone.

Natalie: Discusses some of her research for thesis, specifically about the JaniPad.

Elizabeth: I talked to this guy in Costa Rica who got involved in banana fibers. Because I'm always asking people do you know anyone that runs a natural fiber paper company because its similar– how do they set up the supply chain, all that stuff. I talked to this guy who worked in Costa Rica about twenty years ago, and he was thinking about starting up this company because there are so many banana trees that it was fermenting and going into the water. It was very toxic.

Natalie: Wow, that's interesting. Is there any problem with that in Rwanda?

Elizabeth: No! There's no water! (Laughing)

Natalie: How often do you go to Rwanda?

Elizabeth: I'm going every quarter of so. I'll go in June with Connie. Our big donor is going to be there. It's not as much, so its good I have more time these days to think about what's next.

[Goes off the record for a moment...]

Natalie: talks about research about the research of feminine hygiene products in the United States.

Elizabeth: Wholesale it would be a school nurse or a private sector. And my colleagues say if it's probably a male kiosk owner. So the girls, they're totally… That's why we wanted a community health worker because it's a peer. (26:00)

Natalie and **Elizabeth** casually discuss pads….

Natalie: What types of funding? Organizations? Echoing Green?

Elizabeth: Echoing Green doesn't fund us anymore, that was a two-year thing. Most of money comes from individuals. Predominantly men – the majority of funds are from men. But they step away and they don't want to be engaged. Where as the women want to be engaged, but they don't write as big of checks. But we're trying to change that.

Natalie: How do you change that?

Elizabeth: I don't know. I think with men its all psychology – I mean do you try to egg them on? Real men talk about pads! Haha. I talk a lot about the business model when I talk to men. And I think that's why they give and they get excited about the entrepreneurial aspects of things. With women, I think it's a problem overall. They hold the majority of wealth in this country and I think it could be a generational thing and the opportunities to be in business weren't available to people like my mom's age. So they feel less comfortable writing big checks. Whereas the 50 year old woman would be more likely to, but she has 2 kids in college right now. So I think it will change over time.

Natalie: I think that might be it. It seems like lots of things are moving forward, so I'm glad that we met.

Casual conversation for the rest of the meeting.